PLAN FOR INDIRECT FIRE SUPPORT AND AIR DEFENSE (PART II)

SUBCOURSE NO. IN0802

US Army Infantry School
Fort Benning, Georgia

7 Credit Hours

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GENERAL

The purpose of this subcourse is to identify the principles, responsibilities, procedures and organization for fire support planning at company, battalion, and task force levels. It will also identify considerations and procedures for planning fire support for the tactical operations of the maneuver units. As such, you need to know how planning and coordination of fire support determine the use of resources and the action needed to make the plan happen.

TASK: Identify the principles, responsibilities, procedures, and organization for fire support planning and coordination at the company/team and battalion/task force levels; and identify considerations and procedures for planning fire support for the tactical operations of maneuver units.

CONDITIONS: Given the subcourse material, a training scenario and extracts, as applicable, the student will complete the examination at the end of this subcourse.

STANDARD: The student will successfully answer 70 percent of the questions on a multiple-choice based examination for Subcourse IN 0802 by identifying the principles, responsibilities, procedures, and organization for fire support planning and coordination at the company/team and battalion/task force levels, and identifying considerations and procedures for planning fire support for the tactical operations of maneuver units.

TABLE OF CONTENTS

INTRODUCTION

Relationships between infantry, field artillery, aviation and naval support will play a major role in AirLand Battle. Fire support planning and coordination are functions in the command channels. All forces must work and fight together to win future wars.

Success on the battlefield depends on careful planning and integration of all assets available. Offensive and defensive operations depend on how well everyone is trained and how they perform together.

This subcourse will provide procedures for planning fire support for tactical operations. It will also train you in the roles of the different fire support coordinators at each level they represent.

To be proficient, an infantry officer must be able to plan, coordinate support, and successfully complete his mission.

On the modern battlefield, as well as during peacetime, all infantry soldiers must feel confident that their leaders know how to support each type of mission they must endure.

LESSON 1

FIRE SUPPORT PLANNING AND COORDINATION

TASK

Identify the principles, responsibilities, procedures, and organization for fire support planning and coordination at the company/team and battalion/task force levels.

CONDITIONS

Given the subcourse material for this lesson, a training scenario, and extracts as applicable, the student will complete the practice exercise at the end of this lesson.

STANDARD

The student will demonstrate his comprehension and knowledge of the task by identifying the principles, responsibilities, procedures, and organization for fire support planning and coordination at the company/team and battalion/task force levels.

REFERENCES

FM 6-20

FM 6-20-30

FM 6-20-40

FM 6-20-50

FM 6-30

GENERAL

Fire support planning and coordination are functions of command. The maneuver commander is assisted in performing these functions by the senior field artillery representative present at the supported force headquarters. These functions are separate and distinct requirements that occur concurrently at all levels of the team/company to corps. Fire support planning is determining how to use the available fire support resources. Fire support coordination is that action needed to make the plan happen.

Learning Event 1:
IDENTIFY THE RELATIONSHIP THAT EXISTS BETWEEN THE MANEUVER COMMANDER AND THE SUPPORTING FIRE SUPPORT COORDINATOR (FSCOORD), THE ROLE OF THE MANEUVER COMMANDER IN FIRE SUPPORT PLANNING, AND THE PRINCIPLES OF FIRE SUPPORT

An effective relationship between commanders and their fire support coordinators (FSCOORDs) from corps to company/team is essential. This relationship must exist at all times, particularly at the company, battalion and brigade levels. Successful combined arms teamwork can be achieved only by careful assignment of experienced field artillery (FA) personnel as fire support team (FIST) chiefs and battalion and brigade fire support officers.

Every effort must be made to ensure that FISTs and fire support elements train with their supported maneuver units on a continuous basis, not just for field exercises or live fires. Only through this kind of association can the full potential of maneuver and firepower be realized.

This dedication to the combined arms team is the only way to ensure the complete integration of maneuver and firepower. This association must be firmly established before the battle is joined. Applying the tactics, techniques, and procedures for fire support planning and coordination must become second nature to the maneuver commander and to field artillerymen. Without this dedicated approach, we will not be prepared to meet the demands of the AirLand Battle.

FIRE SUPPORT AND THE MANEUVER COMMANDER

The maneuver commander must understand his fire support system and how to integrate it with his maneuver forces. The FSCOORD must understand the needs of the force throughout the battle and the technique for running the fire support system at full efficiency.

The maneuver commander integrates all fire support and maneuver assets to maximize combat power for the combined arms team. As he develops his battle plan for the employment of maneuver forces, he must:

- Visualize how he will use his fire support resources.
- Decide which subordinate echelon he will weight with fire support.
- Designate what targets to attack with what fire support means.
- Designate priorities for engaging targets and allocating fire units.

The maneuver commander is ultimately responsible for the integration of all fires with maneuver. The FSCOORD is his principal assistant to ensure that a fire support plan is developed, that all available fire support is considered, and that the maneuver plan is enhanced.
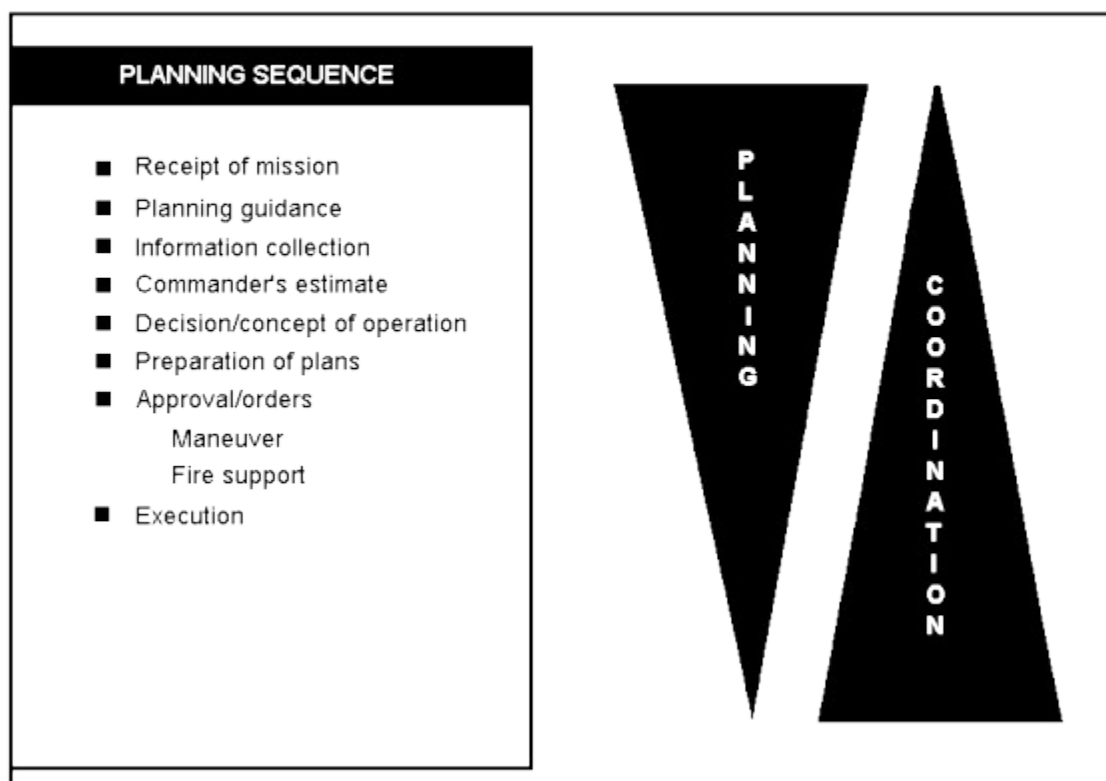
The payoff of this joint planning effort is the realization of total force potential. Combat power must not be wasted through piecemeal application of a poorly operated combined arms team.

The commander's battle planning begins when he receives a mission and continues throughout the execution of that mission ([figure 1](#)). Evaluating, refining, revising, and deciding how to accomplish his mission is a dynamic process. During this process, the commander constantly seeks the most efficient and effective application of all his resources to generate maximum combat power. The commander includes the FSCOORD in every step of his decision-making process.

The commander must have all necessary information on available fire support. To ensure this, the FSCOORD begins his planning when the commander announces the mission to the staff. On the basis of the commander's intent, the FSCOORD anticipates maneuver requirements and deduces the fire support mission.

During the combat decision-making process, the commander and his primary staff officers require information about the fire support system in order to accurately develop their estimates. The commander can get the information directly from those special fire support staff officers (liaison representatives) in the fire support element (FSE) (naval gunfire liaison officer ([NGLO], air liaison officer [ALO], etc.). However, he relies on the FSCOORD to collect and correlate this information.

FIGURE 1.   FIRE SUPPORT PLANNING AND
COORDINATION CONCEPT.

PLANNING SEQUENCE

- Receipt of mission
- Planning guidance
- Information collection
- Commander's estimate
- Decision/concept of operation
- Preparation of plans
- Approval/orders
    Maneuver
    Fire support
- Execution

PLANNING

COORDINATION

The FSCOORD must be prepared to report this information early in the process. Information he provides the commander includes:

- How the characteristics of the area of operation (observation and fields of fire, cover and concealment, obstacles, key terrain, avenues of approach [OCOKA], terrain, weather, and other pertinent factors) can affect fire support operations.

- How the enemy's capabilities can affect fire support operations.

- The friendly fire support situation (status of guns, close air support, FISTs, etc.).

This information provides a basis for a later report on the anticipated difficulties the fire support system may experience in supporting the operation. The FSCOORD also briefs the commander on how the personnel, logistics, and civil-military operations will affect fire support operations. Finally, he identifies the difficulties the fire support system will encounter in supporting the operation.

The information-gathering/planning process described above is not all-inclusive. Each commander will have different requirements. As the FSCOORD strengthens his relationship with the commander, he may tailor these initial reports according to the commander's habits and operational style.

Commander's Estimate

The commander's estimate is a method, or tool, used to collect and analyze relevant information that will help him to formulate the best possible plan of action for a particular operation. This estimate answers the question, "How will I apply my resources to best accomplish my mission?" It produces the "design" of the battle plan.

During the battle, the commander is constantly anticipating, estimating, and evaluating the situation. Under battlefield conditions, the estimate process is less formal, producing rapid, sound decisions on the basis of immediate information and needs. At brigade and lower levels, the estimate process normally is verbal rather than written.

As the commander is preparing his estimate, primary and other applicable staff officers are also compiling their estimates. During this estimating process, the FSCOORD constantly provides current fire support information, as needed, to the commander and his staff. The FSCOORD is especially active in the development of the operations estimate by the S3/G3. For each course of action developed by the S3/G3, the FSCOORD provides fire support resource information. Concurrently, the FSCOORD and his staff (at FA battalion and higher levels) should prepare a supporting commander's estimate of the situation. This is to ensure complete analysis of the mission from the fire support perspective.

After completion of the estimates, the staff briefs the commander and provides recommendations on the best way to accomplish the mission. Included in the briefings are all courses of action that were considered and/or developed.

Wargaming

The commander then wargames each course of action to see how the battle will progress. He visualizes the battle in depth to determine how deep attacks can support his plan. He mentally fights each action, up to and including mission accomplishment. This helps him to determine the risks involved and the

probable success of each course. Of course, different commanders will have different staff officers present during the wargaming process. A common solution, however, is for the commander to have the S3/G3, the S2/G2, and the FSCOORD with him. It is during the wargaming process that the FSCOORD makes his greatest contribution to the planning effort.

As the commander wargames, the FSCOORD provides the most current information for applying all elements of the fire support system. He also recommends the best method to apply fire support in concert with his other resources. While the commander fights games to determine factors critical to success, the FSCOORD mentally:

- Attacks emerging targets with the most effective system.

- Determines the task/requirements for all fire support system elements.

- Considers proper distribution of assets for close support of maneuver elements, for counterfire, and fire interdiction fires.

- Visualizes indirect fire unit movements required to follow the battle flow.

- Considers logistical needs and their impact on the battle.

The process continues with the commander examining all possible actions to ensure that he has determined all factors critical to success. All members of the staff, of course, help in their areas of expertise.

When wargaming is complete, the FSCOORD will have determined which course of action can best be supported from the viewpoint of the fire support system. The FSCOORD must advise the commander if a course cannot be supported or requires additional fire support. This should be rare, since the commander will have involved his FSCOORD throughout the major steps in the decision-making process.

After wargaming and analyzing all courses of action, identifying their advantages, disadvantages, and risks, the commander decides which course of action to follow. He then restates it and elaborates on his concept of the operation in his completed commander's estimate. Included is his decision on who performs elements of the mission and his intent during all phases of the operation. His concept and intent form the basis for paragraph 3a, Concept of Operation, in the operation order.

The commander's staff, to include the FSCOORD, now has the necessary information to prepare operation plans/orders.

PRINCIPLES OF FIRE SUPPORT

The principles of fire support are the framework for an automatic thought process that the FSCOORD follows to ensure the most effective use of available fire support assets.

These principles will apply at all levels of commands, no matter what fire support assets are available. Some of these principles may be more applicable to either fire support planning or fire support

coordination, but all must be applied to ensure effective fire support. These fire support principles are discussed in the following paragraphs.

Plan Early and Continuously

One principle of fire support is to plan early and to continue planning throughout the operation. To effectively integrate fire support with maneuver, planning must begin when the commander states his mission and provides his command guidance. Whenever the commander's guidance is needed during the planning of an operation, the FSCOORD should solicit that guidance from the commander. Planning is continuous and keeps pace with the dynamics of the battle. Both close and deep targets must be considered.

Exploit All Available Targeting Assets

The FSCOORD must ensure that target information from all available resources at his echelon is rapidly evaluated and routed to the appropriate fire support delivery agency. He must ensure that the acquisition requirements of the fire support system are identified.

Consider the Use of All Lethal/Nonlethal Fire Support Means

Each FSCOORD considers the attack means available at his level and higher levels. He also considers the command guidance for the use of available means in the present battle and in future battles.

Use Lowest Echelon Capable of Furnishing Effective Support

Fire support is delivered by the lowest level having effective means available. The FSCOORD must decide what is needed. If his own assets are inadequate, he must request additional fire support from the appropriate echelon.

Use the Most Effective Means

Normally, requests for fire support are sent to the agency which has the most effective means. The FSCOORD considers the nature and importance of the target and the likelihood of its staying in its current location. He also considers the availability of attack means and the results desired. It is often necessary to use secondary assets to temporarily fix the target (tgt) until a more effective means can attack it. An example of this is a situation in which air support is the most desired means but is about 20 minutes away. In this case, indirect fire weapons can fix the target until aircraft arrive.

Furnish Type of Support Requested

Usually, the fire support requester is in the best position to know what is needed. However, the FSCOORD is in position to weigh the request against the commander's guidance on priority targets and the current and future needs for fire support. If a request for fire support is disapproved, the FSCOORD stops the request and notifies all concerned. When possible and necessary, he substitutes a new fire support means and alerts the agencies that are to provide and to receive the support.

Avoid Unnecessary Duplication

A key task for the FSCOORD is to ensure that duplications of fire support are resolved. Also, he must ensure that only the minimum force needed to get the desired effects are used on a single target.

Consider Airspace Coordination

The target trajectories of indirect fire weapons are hazardous to friendly aircraft operating in the area. The FSCOORD provides input about fire support use of airspace to those agencies and personnel engaged in airspace management. At division and corps, air defense and aviation liaison representatives often collocate with fire support elements to enhance the exchange of information. At lower levels, such coordination may include forward air controllers, naval gunfire (NGF) spotters, aerial observers, and other airspace users.

Provide Adequate Support

Another important fire support principle is to provide adequate support. The mission of the force and the commander's guidance determine the amounts and types of fire support needed for success. The FSCOORD recommends, and the supported commander approves or alters, the fire support allocations that will best meet his needs. The FSCOORD must clearly inform the maneuver commander when adequate resources are not available to support his plan.

Provide Rapid Coordination

The FSCOORD must know the characteristics of the various fire support weapons. He must also have immediate information on the availability of these means. He must stay abreast of the battle as it develops in order to attack both planned targets and targets of opportunity. This is to ensure that coordination channels are functioning smoothly. Considerations for rapid coordination include:

- Exact locations of supported maneuver units.
- The scheme of maneuver of the supported force.
- Supported commander's guidance/standing operating procedures (SOP).
- Fire support coordinating measures in effect.

● Rules of the host nation, if appropriate.

Although planning is done regardless of boundaries and friendly locations, the execution (coordination) of the fire support must always take these realities into account. To ensure responsive and safe fire support, the FSCOORD must continuously use and update all types of fire support coordinating measures.

Provide for Flexibility

The FSCOORD must anticipate and provide for future contingencies. On-order missions and the careful positioning of indirect fire means give the commander flexibility in responding to changing battle conditions.

Provide for the Safeguarding and Survivability of Friendly Forces/Installations

Several measures can be used to accomplish this principle. Some of them are:

● The use of fire support coordinating measures.

● The use of restricted firing positions to eliminate or reduce firing signatures.

● Consideration of the location of friendly forces during target analysis.

In implementing this principle, safety measures must not become so restrictive that they unduly degrade the effectiveness of fire support.

You have just learned that a special relationship must exist between the maneuver commander and the FSCOORD. You have also learned the fire support principles to be used in planning and coordinating fire support.

The next learning event will describe the characteristics of fire support planning and coordination.

Learning Event 2:
IDENTIFY THE CHARACTERISTICS OF, AND FSCOORD RESPONSIBILITIES FOR, FIRE SUPPORT PLANNING AND COORDINATION

Fire support planning is the continuous process of analyzing, allocating, and scheduling fire support. The goal of fire support planning is to effectively integrate fire support into battle plans to optimize combat power. To accomplish this goal, fire support planning is performed concurrently with battle planning.

FIRE SUPPORT PLANNING

The planning process determines how fire support will be used, what types of targets will be attacked, when, and with what means. Planning must be flexible enough to accommodate the unexpected in

combat. Fully integrated fire support results only when the FSCOORD is an aggressive contributor to the maneuver commander's planning sequence and decision-making process. This planning involves much more than planning targets and choosing the proper weapon/ammunition combination. Fire support planning also includes:

- Allocating and positioning fire support assets.
- Tactical battlefield deception.
- Survivability.
- Survey.
- The use of target acquisition and communications assets.
- Flexibility.
- Target priorities.
- Intended effects of the fire support.

Good fire support planning facilitates rapid change. It anticipates the massing of fires, changes to the force mission, realistic movement times, resupply, target acquisition, and the replacement of entire units. Good fire support planning is flexible.

Priorities

The vast array of targets anticipated on today's battlefield creates competing demands for fire support. Usually, there are more demands than fire support can respond to. To avoid an overload of the system, the supported commander sets priorities on how to use his fire support to meet those demands most critical to his mission. He states his priorities for the allocation of assets, positioning of surface-to-surface means, constraints to provide for future actions, and guidance on the attack to specific types of targets.

Generally, targets are prioritized according to their potential danger to the mission. Specifically, priorities are given those targets that can:

- Prevent the execution of the plan (priority 1).
- Seriously interfere with the plan (priority 2).
- Cause serious interference later (priority 3).
- Cause limited interference (priority 4).

The targeting process, to include the target value analysis technique, enables the FSCOORD to recommend target priorities to the maneuver commander.

Guidelines for Desired Effects

Once the maneuver commander has set his target priorities, he issues further guidance, with the advice of his FSCOORD, on the effects he wants to achieve on each target. His decisions are based on ammunition and delivery means available. The effects he requires on a target are expressed, by category, as suppression, neutralization, or destruction.

Suppression. Suppression of a target limits the ability of the enemy personnel in the target area. Firing a high-explosive shell with a time or variable time (VT) fuse creates apprehension or surprise and causes tanks to button up. The effects of suppression fires usually last only as long as the fires are continued. Suppression fires are used against likely, suspected, or inaccurately located enemy firing positions.

Neutralization. Neutralization of a target knocks it out of the battle temporarily. Experience has shown that 10 percent or more casualties may neutralize a unit. The unit will become effective again when casualties are replaced and equipment is repaired. Neutralization fires are used against targets located by accurate map inspection, by indirect fire adjustment, or by a target acquisition device.

Destruction. Destruction puts the target out of action for a prolonged period of time. Depending on the type, morale, and discipline of a unit, 30 percent or more casualties will normally render a unit ineffective. Direct hits are located by accurate map inspection, by indirect fire adjustment, or by target acquisition device.

Categories of Fire Support Planning

The depth and complexity of fire support planning depends on how much time is available and the echelon at which the planning occurs. Planning for contingencies and planning at higher echelons are normally very detailed and are outlined in explicit planning documents. At lower echelons, planning during battle is more spontaneous. Irrespective of the echelons, the FSCOORD at the next higher echelon will provide the initial planning guidance either verbally or in a written document. Whether he receives written or oral guidance, the FSCOORD must ensure that targeting guidelines, attack guidance, and other fire support demands are met. Many of the actions that occur in response to battle situations are established in SOPs and in fragmentary orders (FRAGOs). Depending on the time available and the echelon at which planning occurs, the planning may be formal or informal.

Formal Fire Support Planning. This is a deliberate process that usually flows from higher to lower echelons. Formal planning (figure 2, view A) involves a detailed consideration of what fire support is available, how to get it, and how to integrate fire support and maneuver. This type of planning deals with specific operations. At brigade and higher levels, formal planning usually results in a written fire

support plan. It is disseminated from higher to lower headquarters as part of the commander's operation order.

FIGURE 2. FORMAL AND INFORMAL FIRE SUPPORT PLANNING.
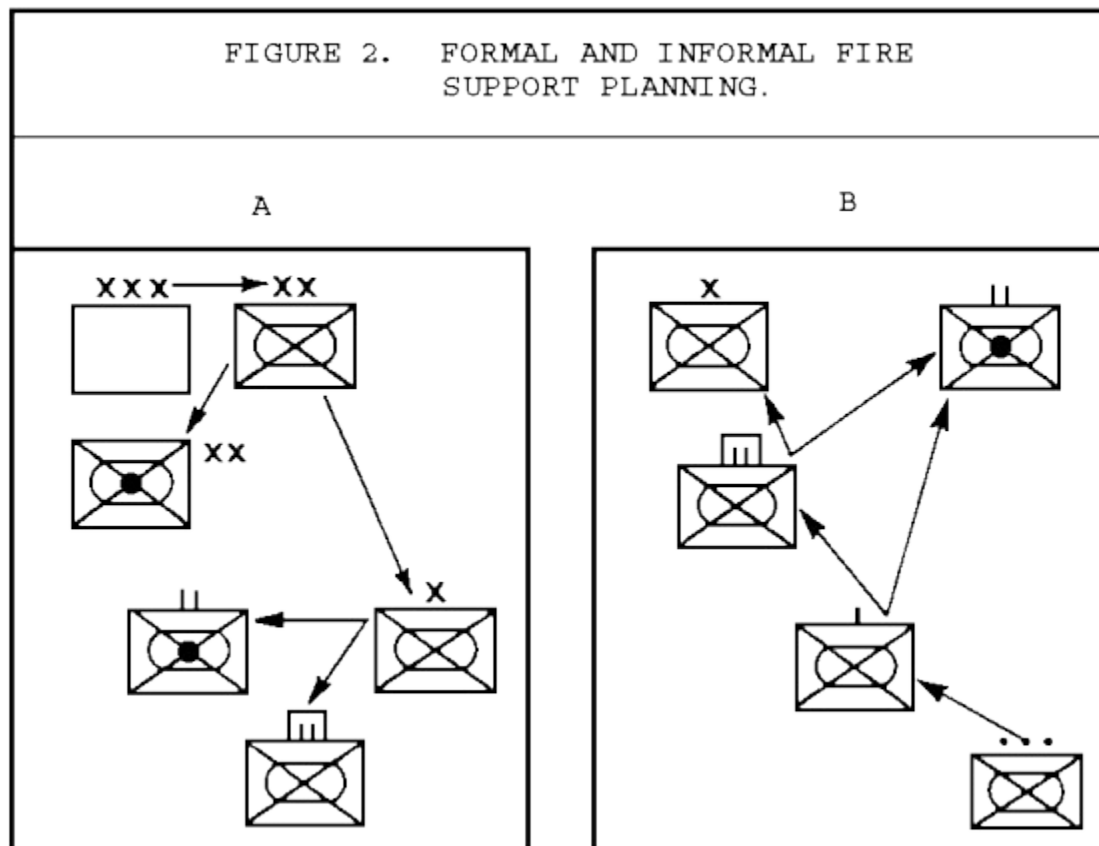
Informal Fire Support Planning. This is a far more dynamic process that responds to the immediate problems on the battlefield. Generally, it flows from lower to higher echelons and occurs primarily at the maneuver company and battalion levels. Informal planning (figure 2, view B), like formal planning, is a product of the situation, the time available, and the echelon at which it occurs. Because it is a spontaneous process tied to the immediate needs of the force, informal planning is normally done orally rather than in writing.

FIRE SUPPORT COORDINATION

Fire planning is of little value if the coordination necessary to ensure the successful execution of a battle plan cannot be accomplished. Fire support coordination is the continuous process of implementing fire support planning and managing the fire support assets that are available to a maneuver force.

Fire support facilities (which will be discussed in learning events 3 and 4 of this lesson) provide channels through which fire support is planned and coordinated. These facilities have immediate access to all available fire support means: the division artillery tactical operations center (TOC), the corps

artillery TOC, the fire direction centers for indirect fire weapons, supporting ships, and air support action agencies. The goal of fire support coordination is to address those actions necessary to expedite the timely attack of targets and simultaneously provide safeguards for friendly forces.
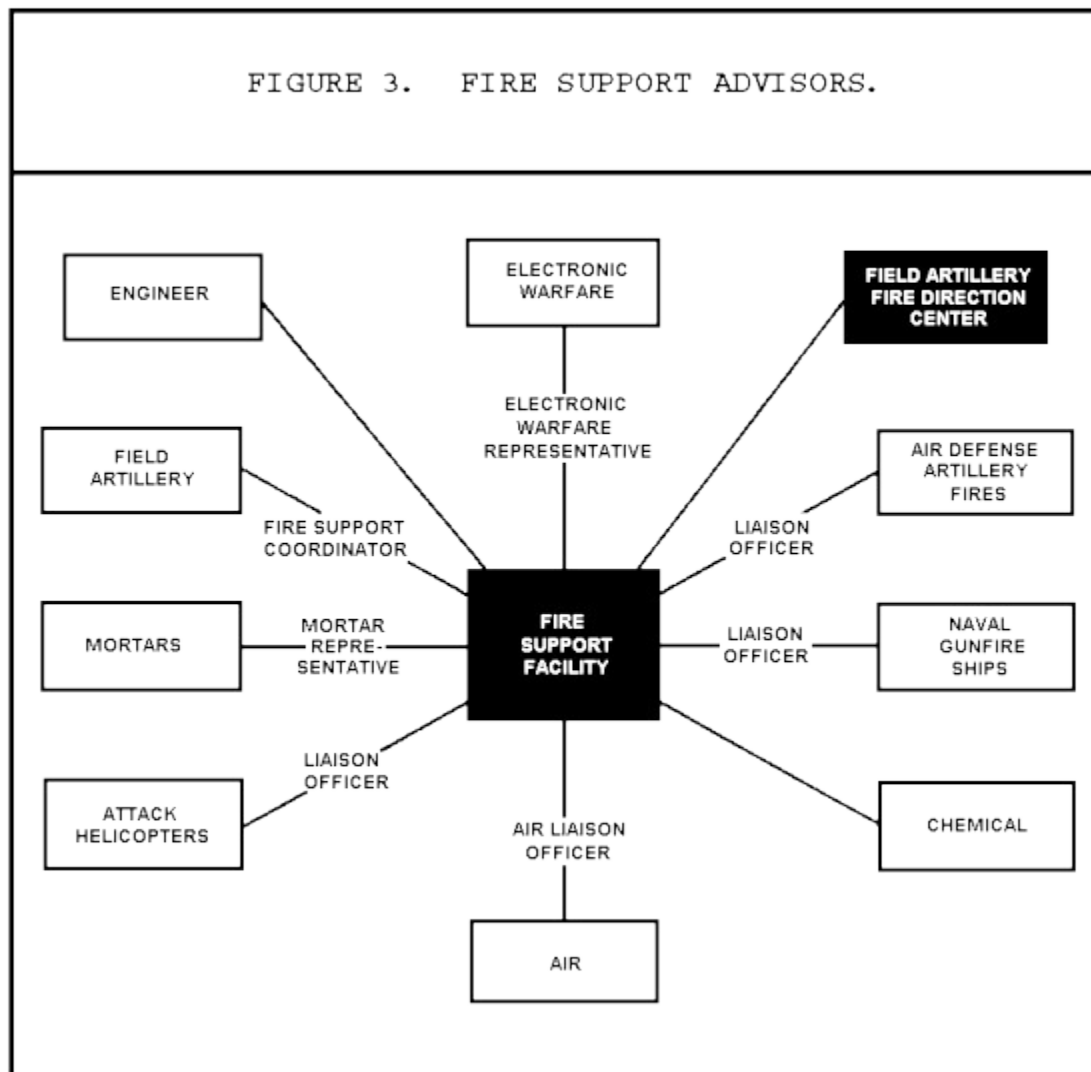
Fire Support Planning and Coordination Responsibilities

At each echelon, the FSCOORD and FSE personnel are advised on the use of the various fire support means by liaison representatives from those elements providing the means. At maneuver battalion and higher level command posts, advisors are available as shown in <u>figure 3</u>.

The FSCOORD at each echelon plans and coordinates as discussed below.

<u>Planning Responsibilities</u>. In planning, the FSCOORD:

- Anticipates mission requirements so he can advise the command how to best use fire support.

- Assesses the fire support means available and, on the basis of that assessment, recommends priorities of fire and allocation of fire support.

- Ensures the effective use of all agencies that can provide target information.

- Studies the enemy situation and force mission and recommends what targets to attack and how to attack them.

- Makes necessary plans to offset the unexpected and to expedite changes.

- Plans the use of all fire support agencies as they contribute to the overall fire support plan.

- Determines coordinating measures that will best facilitate maneuver actions and provide safeguards to protect friendly elements.

- Develops and coordinates an efficient, fully integrated, fire support plan.

FIGURE 3. FIRE SUPPORT ADVISORS.

Coordination Responsibilities. As part of his coordination responsibilities, the FSCOORD:

- Anticipates changes dictated by the developing battle and recommends revision of the fire support plan.

- Directs the fire support attack of targets in the priority established by the commander.

- Tasks the most effective fire support means to attack targets.

- Coordinates all fire support in the commander's zone or sector.

- Ensures the safeguarding of friendly elements.

- Ensures continued flow of targeting information.

You have just learned about the planning and coordination of the different fire support elements. In the next learning event, you will learn about the fire support and observation/lasing teams, and their functions at the company/team level.

Learning Event 3:
IDENTIFY THE ORGANIZATION, EQUIPMENT, COMMUNICATIONS, DUTIES AND FIRE SUPPORT PLANNING AND COORDINATION FUNCTIONS OF THE COMPANY/TROOP FIRE SUPPORT TEAM (FIST) AND OBSERVATION/LASING TEAMS

Fire support coordination facilities are established at each level of maneuver command, company through corps. The fire support coordination facility is established and supervised by the FSCOORD of the given echelon of command, the facility is staffed and equipped by representatives from each fire support asset responsive to that echelon.

The learning event will discuss the company/troop level fire support team, their equipment, and how they plan and operate fire support.

THE COMPANY/TROOP FIRE SUPPORT TEAM (FIST)

Supporting field artillery provides the FIST to all company-sized ground maneuver elements of a force. Usually, these teams are attached to supported companies/teams upon deployment and stay with these units for the duration of hostilities. Each FIST is equipped and trained to provide:

- A full-time fire support advisor/coordinator. This is the company fire support officer (CO FSO).
- An observation capability.
- A communications link to all available fire support.
- Full-time liaison for supporting field artillery.

FIST Personnel and Equipment

There are two types of FISTs. The organization of the FIST depends on the type unit that is supported. For infantry and mechanized infantry companies, a FIST consists of a three- or four-man headquarters and three two-man platoon forward observer (FO) parties. Tank companies and armored cavalry troops have only the four-man FIST headquarters. The FO function is performed by maneuver personnel (tank commander).

NOTE

When additional or replacement FISTs/FOs are required, they are provided by the direct support (DS) battalion. Precautions should be taken to avoid splitting established fire support teams/fire support sections.

In addition to the field artillery (FA) personnel, a forward air controller (FAC) and/or a firepower control team (FCT) may operate with the FIST personnel.

To facilitate FIST activities on the battlefield and to provide mobility commensurate with the supported force, each FIST is equipped according to the type of force supported; that is, mechanized infantry, armor, and airborne.

The Fire Support Team Vehicle. An important item of equipment found with mechanized infantry and armored FISTs is the fire support team vehicle (FISTV). The FISTV greatly enhances the ability of the FIST to provide fire support to the maneuver company. It enables the FIST headquarters to acquire and lase targets for terminally-guided munitions and to coordinate fire support for the company from within the armor protection of the carrier.

The FISTV's laser capability is used for range finding and for designating targets for attack with precision guided munitions. These capabilities bring a new dimension to fire support. The type of laser designator that is employed with the FISTV is the ground/vehicular laser locator designator (G/VLLD) AN/TVQ-2.

The G/VLLD. The G/VLLD provides a ground observer with three important capabilities:

- Ability to designate stationary or moving point targets at ranges up to 5 kilometers.

- Ability to determine observer-to-target range to an accuracy of ± 5 meters at ranges up to 10 kilometers.

- Ability to determine accurate azimuth and elevation angle data that, when coupled with distance data, can be used to significantly reduce target location errors.

The G/VLLD has several other valuable characteristics, such as its ability to interface with the digital message device (DMD) (figure 4B).

The G/VLLD is also equipped with an AN/TAS-4 thermal night sight. This sight allows the operator to use the system during periods of limited visibility and battlefield obscuration.

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FIGURE 4.    WIRE CIRCUITS/DIGITAL MESSAGE DEVICES.


              A                                    B


    FORWARD   FORWARD   FORWARD                        FIST DMD
    OBSERVER  OBSERVER  OBSERVER


                                                        SINGLE-CHANNEL
         FIST      SWITCH-                                  DMD
         HEAD-     BOARD
    FROM FIRE  QUARTERS
    SUPPORT              SUPPORTED
    OFFICER               UNIT

        ¹If assigned.
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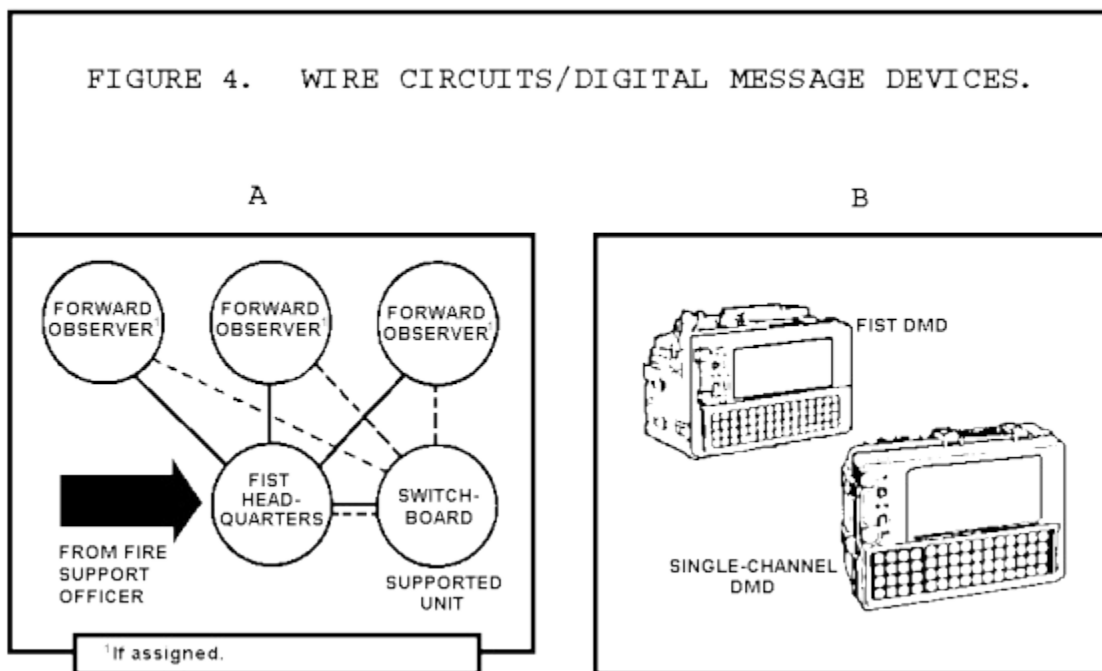
Digital Message Devices (DMD). Both the FIST headquarters and the platoon FO parties of light and heavy forces are equipped with two-way digital message devices. The DMD transmits and receives in digital bursts over any standard Army communications equipment. The DMD is portable and battery-powered. It is easily attached to a AN/PRC-77, an AN/GR-160, an AN/VCR-46/47, single-sideband (SSB) radios, or WD-1 field wire.

Five categories of messages providing a total of 29 message formats are available with the DMD. They allow digital transmission of any operational message an observer would need to send. The categories are: standard fire request, adjustments of fire, registration, intelligence, and information. (For further information, see TM 11-7440-281-12P.) The FIST DMD has been developed with four communication channels. It serves as a communications relay point that permits the FIST headquarters to review, edit, and forward calls for fire from the FOs to the appropriate fire support assets (figure 4A). The FIST DMD is organic to infantry, mechanized infantry, and armored FIST headquarters.

The personnel and equipment for the different types of FISTs are shown in table 1 below.

TABLE 1. FIRE SUPPORT TEAMS.

UNIT	PERSONNEL			EQUIPMENT	
	NUMBER	RANK	TITLE	NUMBER	ITEM
Infantry FIST	1 1 3 1 3	LT E6 E5 E4 E3	FIST chief Fire support sergeant Forward observer Fire support specialist Radiotelephone operator (RATELO)	2 2 3 1 1 4	1 1/4-ton utility armament truck (high-mobility, multipurpose wheeled vehicle [HMMWV]) (one truck equipped with G/VLLD) Radio set AN/GRC-160 Radio set AN/PRC-77 Radio set AN/VRC-47 FIST DMD DMD
Light Infantry FIST	1 1 3 1 4	LT E6 E5 E4 E3	Fire chief Fire support sergeant Forward observer Fire support specialist RATELO	6 4	Radio set AN/PRC-77 DMD
Mechanized Infantry FIST	1 1 3 1 4	LT E6 E5 E4 E3	Fire chief Fire support sergeant Forward observer Personnel carrier driver RATELO	1 6 1 1 4	Full-tracked personnel carrier (FISTV) Radio set AN/GRC-160 Radio set AN/VRC-46 FIST DMD DMD
Armored FIST	1 1 1 1	LT E6 E4 E3	FIST chief Fire support sergeant Personnel carrier driver RATELO	1 3 1 1 1	Full-tracked personnel carrier (FISTV) Radio set AN/GRC-160 Radio set AN/VRC-46 FIST DMD DMD

FIST COMMUNICATIONS CONTROL METHODS

Communications methods for FIST control of forward observers vary according to table of organization and equipment (TOE) constraints. One of the following situations will exist:

- FIST headquarters will have FM voice capability only (no digital equipment).

- FIST headquarters will be equipped with the FIST DMD.

- FIST headquarters will be equipped with the single-channel DMD.

The options available in each of these situations are described in the following paragraphs.
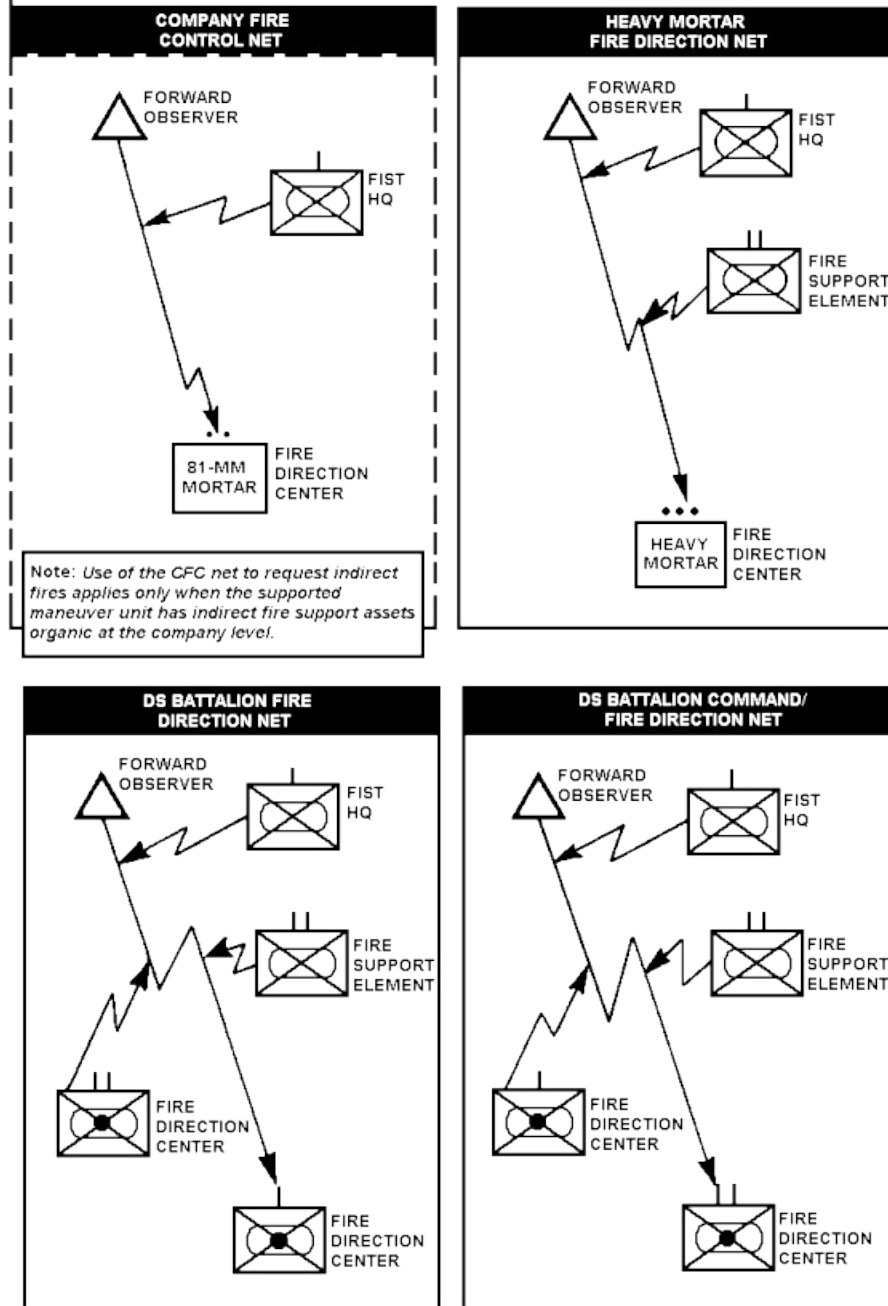
FIST Headquarters with FM Voice Capabilities Only

The FIST headquarters with FM voice capabilities only has three options for controlling fire requests from its forward observers. These options are valid for FISTs of all types regardless of specific equipment authorization/availability. They are the only options for FIST control that apply to light infantry division forces and other similarly structured light forces.

Option 1. The FO can initiate calls directly on any assigned net (figure 5). This option is highly responsive if requests are few. Traffic density on any particular fire direction (F or FD) net could preclude use of this decentralized option.

Option 2. The FIST headquarters predesignates a primary net for each FO (for example, heavy mortar, FD) (figure 6). The use of any other means of fire support requires the FO to coordinate with the FIST headquarters. This option is highly responsive when the type of fire requested by the FO remains unchanged. A change in the type of fire requires additional transmissions. This option provides positive control by the FIST headquarters, which prevents fire support net overload. It is a compromise between centralized and decentralized control.

FIGURE 5. FIST WITH FM VOICE CAPABILITY ONLY (OPTION 1).

COMPANY FIRE CONTROL NET

FORWARD OBSERVER

FIST HQ

81-MM MORTAR | FIRE DIRECTION CENTER

Note: *Use of the CFC net to request indirect fires applies only when the supported maneuver unit has indirect fire support assets organic at the company level.*

HEAVY MORTAR FIRE DIRECTION NET

FORWARD OBSERVER

FIST HQ

FIRE SUPPORT ELEMENT

HEAVY MORTAR | FIRE DIRECTION CENTER

DS BATTALION FIRE DIRECTION NET

FORWARD OBSERVER

FIST HQ

FIRE SUPPORT ELEMENT

FIRE DIRECTION CENTER

FIRE DIRECTION CENTER

DS BATTALION COMMAND/ FIRE DIRECTION NET

FORWARD OBSERVER

FIST HQ

FIRE SUPPORT ELEMENT

FIRE DIRECTION CENTER

FIRE DIRECTION CENTER

Option 3. The FO requests specific fire support through the FIST headquarters, which directs the FO to the appropriate FDC (figure 6). While less responsive than either option 1 or option 2, option 3 provides the FIST headquarters with the most positive centralized control.

FIGURE 6. FIST WITH FM VOICE CAPABILITY ONLY (OPTIONS 2 AND 3).

FIST OPTION 2

FIST HQ predesignates a net for each forward observer. In this example, the FO is communicating directly with the heavy mortar platoon.

COMPANY FIRE CONTROL NET

FORWARD OBSERVER

FIST HQ

HEAVY MORTAR | FIRE DIRECTION CENTER

OPTION CONSIDERATIONS

- Highly responsive if type of fire does not change
- Requires additional transmissions to coordinate change in type of fire
- Provides positive control by FIST HQ
- Prevents FD net overload

FIST OPTION 3

Forward observer requests specific support through FIST HQ, which will direct forward observer to appropiate fire direction center. In this example, the FIST HQ directed the FO to a specific asset-the heavy mortars.

COMPANY FIRE CONTROL NET

FORWARD OBSERVER

HEAVY MORTAR | FIRE DIRECTION CENTER

FIRE SUPPORT ELEMENT

FIST HQ

REQUEST FOR SUPPORT MEANS AND NET ASSIGNED BY FIST HQ

OPTION CONSIDERATIONS

- Less responsive than other options
- Greatest degree of control for FIST HQ
- Prevents FD net overload

FIST Headquarters Equipped with the FIST DMD

When the FIST headquarters is equipped with the FIST DMD, three communications options exist for controlling fire requests from DMD-equipped forward observers.

Review Mode. When the FIST DMD is placed in the review mode, all message traffic from the FO is addressed to the FIST DMD. On receipt of a message, the FIST DMD holds the message until the FIST DMD operator calls up the message, modifies it if he desires, and transmits the message to the fire support asset selected by the FIST headquarters. If the FIST DMD is in the review mode, a message returning from the selected fire support asset proceeds in a similar manner. It is addressed to the FIST, is stopped at the FIST DMD, and is sent on by actions taken by the FIST DMD operator. The receive message queue can store 16 messages.

Automatic Mode. When the FIST DMD is placed in the automatic mode, a link is established in the subscriber table between an FO and one of the fire support assets. When a call for fire initiated by the FO is addressed to the FIST DMD, the FIST DMD immediately re-addresses the message to the assigned fire support asset and forwards it to that asset on the appropriate net with no action required by the FIST DMD operator. If the FIST DMD is in the automatic mode, responses from the fire support asset return in a similar manner.

Fire Request Approval Mode. When the FIST DMD is placed in the fire request approval (FRA) mode, a link is established between the FO and the fire support asset. This link is terminated at the conclusion of the transmission by the transmission of an end-of-mission (EOM) message. For example, when an FO addresses a call for fire to the FIST DMD, the FIST DMD stops the message and holds it until the operator calls up the message, reviews it, and sends it on to the appropriate destination. On transmission of the message to the selected fire support asset, a link is established so that all transmission will continue to flow as in the automatic mode until one of the parties sends an EOM message.

FIST Headquarters Equipped with the Single-Channel DMD

A FIST headquarters equipped with the single-channel DMD has two options for controlling fire requests.

Option 1. The FIST headquarters may use a voice/digital mode of operation (figure 7). In this mode, the FO notifies the FIST headquarters of a fire request by voice, on the company fire control (CFC) net. The FIST headquarters then directs the FO to the proper fire net. The FO begins his fire mission with either a voice request to the mortars or a digital request to the FA fire direction center (FDC). Voice requests for fire from armor or infantry personnel are passed over the CFC net. The FIST headquarters ensures that voice traffic is not placed on the FA fire (digital) net. The decentralized mode of control is used only during surge periods of the battle when the FIST headquarters is inundated with activity.

FIGURE 7. FIST HQ EQUIPPED WITH THE SINGLE-CHANNEL DMD (OPTIONS 1 AND 2).
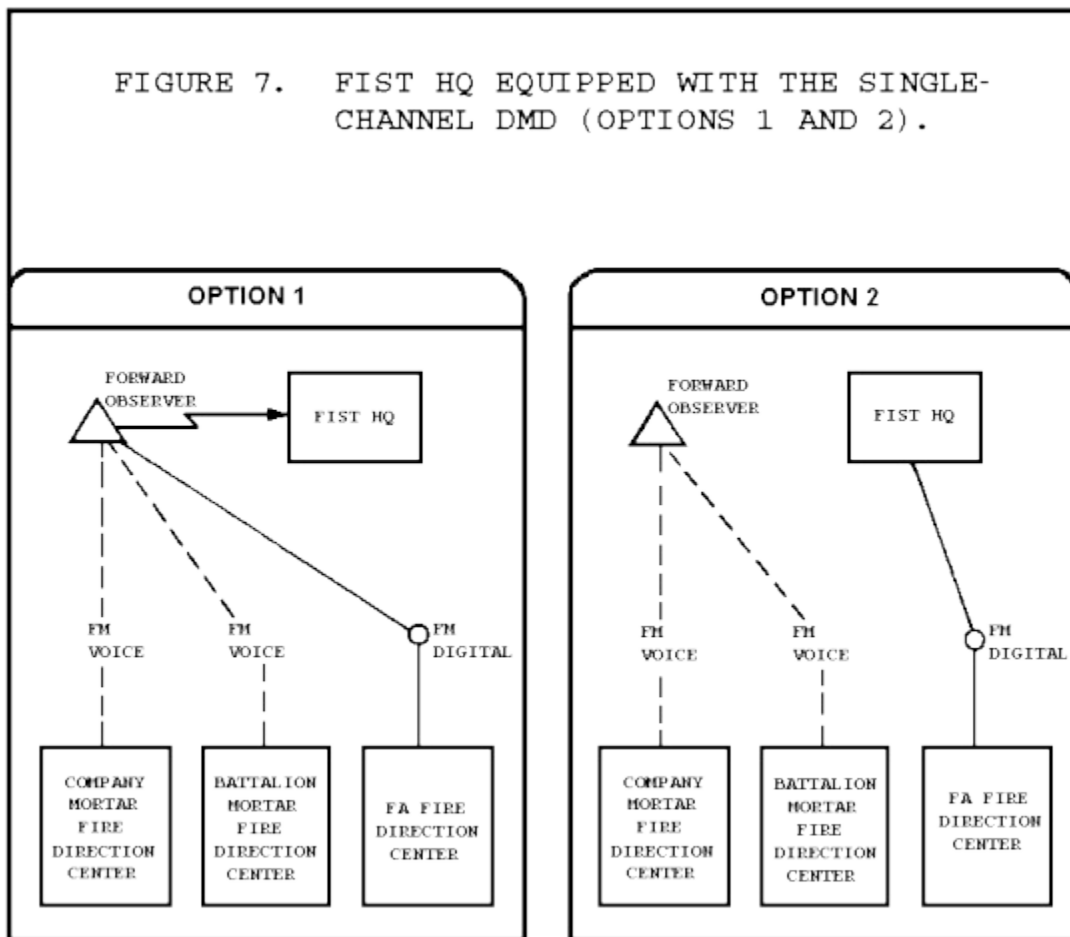
Option 2. The FIST headquarters requires the FO to use only voice requests for fire (figure 7, above). The FIST headquarters composes and transmits all FA fire missions by using its DMD. This option can be applied to all FIST headquarters modes of operation. Option 2 differs from option 1 in that the FIST headquarters converts voice requests for fire into digital requests for FA fire. The advantage of this option is that it allows the FO to operate in voice nets only (CFC or battalion heavy mortar FD), which the FO can preset on his AN/GRC-160 radio. Option 2 allows the FIST HQ to efficiently manage company fire support assets with its single-channel DMD. In the digital world of the tactical fire direction system (TACFIRE), subscribers must continually inform the system of their entry into or departure from the digital net. Option 2 eliminates this requirement. This option centralizes all digital requests at the company level. It is the option used primarily by armored cavalry platoon leaders and sergeants.

FIST COMMUNICATIONS NETS

At the company level the primary means of communication is usually dictated by the situation. Tactical voice radio is used most of the time; however, wire circuits should be installed when practical. The FIST communications nets are described in the following paragraphs.

Maneuver Battalion Heavy Mortar Fire Direction Net (FM)

The FIST chief can operate in this net for heavy mortar support.

Company Fire Control (CFC) Net (FM)

The FIST headquarters is the net control station (NCS) for the CFC net. All fire requests from observers other than artillery observers (for example, armor platoon leader) are received on this net. The forward observers can also use the CFC net to send requests for fire to the FIST. After receipt of the fire request, the FIST chief may:

- Direct the non-FA observer to another fire net to request fires.

- Act as a relay between the requester and the provider of fires.

- Move to a position from which he can handle the mission himself.

If company mortars are available, the FIST sends requests for mortar fire on this net.

DS Battalion Fire Net (Digital)

This net is the primary link from the FIST to TACFIRE. All requests for artillery fire will be sent to the DS battalion on this net.

Company Command Net

The company command net is used by the company commander to control the actions of his subordinates. It is not used to transmit fire requests except in an emergency when no other net is available. Any time the FIST chief is physically located away from the commander, he is required to monitor this net to receive instructions concerning the use of fire support and to keep abreast of the company's operation.

DS Battalion Command/Operations Net (Voice)

This net may be used for fire support coordination requirements as necessary. The maneuver battalion/brigade FSOs are stations within this net. FIST chiefs operate in this net for coordination purpose when the battalion FSO directs them to do so.

Degraded Net Priorities

The FIST chief must decide what radios are to be used to monitor the nets on the basis of the tactical situation. In some cases, full communications may not be available because of human limitations or insufficient equipment. When such restrictions preclude adequate monitoring of all nets, nets will be monitored in the following order of priority:

- DS battalion fire net. (FISTs always operate in this net.)
- Company command net (if the FIST chief is separated from the commander).
- Company fire control net (with platoon FOs and 60-mm mortars on it, when available).
- Maneuver battalion heavy mortar fire direction net.

COMBAT OBSERVATION/LASING TEAMS (COLTs)

One combat observation/lasing team (COLT) is organic to each of the three direct support battalions of a mechanized infantry or armored division. COLTs are organic to each direct support battalion in both infantry and light infantry division forces. COLTs (table 2) will be placed under the control of a FSCOORD, from company to brigade level, to augment the lasing capability of the FIST.

TABLE 2.   COMBAT OBSERVATION/LEASING TEAMS.

UNIT	PERSONNEL			EQUIPMENT	
	NUMBER	RANK	TITLE	NUMBER	ITEM
Mechanized Infantry/ Armored Division	1	E5	Fire support sergeant	1	Full-tracked personnel carrier (FISTV) with G/VLLD
	1	E4	Fire support specialist	1	Radio set AN/GRC-160
	1	E3	Fire support specialist	1	Radio set AN/VRC-46
				1	DMD
Infantry/ Light Infantry Division	1	E5	Forward observer	1	HMMWV with G/VLLD
	1	E4	Fire support specialist	1	Radio set AN/PRC-77
				1	Radio set AN/VRC-46
				1	DMD

DUTIES OF THE FIST IN COMPANY LEVEL FIRE SUPPORT PLANNING AND COORDINATION

The FIST provides fire support planning assistance to the company. The FIST must be familiar with the capabilities and limitations of all fire support systems that may be available to the company.

Fire Support Planning

During preparation for a combat operation, most of the FIST's time is spent in planning. The fire support officer (FSO) should always accompany the commander to plans and orders briefings at battalion. Similarly, the platoon FOs should accompany the platoon leaders to company-level planning sessions. The company commander is responsible for the combat power generated by his company. However, the company fire support officer is responsible for the fire support input to the company commander's plan.

While the company commander is developing his concept of the operation, he and the CO FSO will discuss the fire support requirements. It must be emphasized that these actions are taken informally and concurrently. The CO FSO does not wait for the commander to complete the scheme of maneuver, but inputs fire planning as the scheme of maneuver is being developed. The CO FSO will do most of the company's fire planning. He may also receive planned targets and target information from his platoon observers.

The CO FSO will then complete the company fire plan and brief the commander to obtain his approval. The company commander may alter the plan or approve it as is. The final decision is made by the commander. When the plan is complete, the CO FSO will ensure that targets are passed to the FSE at the maneuver battalion level. This is where all fire support plans are consolidated and integrated into the battalion scheme of maneuver.

In addition, the FSO must ensure that the platoon FOs and platoon leaders are familiar with the fire plan. Overlays should be provided to them and to the company commander. The FSO will plan targets beyond without regard to weapons ranges or capabilities. As the units move forward, priorities may be modified to ensure coverage forward. Again, it must be emphasized that this fire planning process is informal. Most of it takes place orally.

Fire planning is probably the most important task of the CO FSO. Because the modern battlefield is complex, lethal, and confusing, success would be nearly impossible without a proper fire plan to provide fire support of the quality and

quantity needed.

The CO FSO may perform either deliberate or quick fire support planning, depending on the time available. In either case, targets must be placed into the fire planning channels as soon as possible so that they can be processed at the fire direction center/fire support element.

Deliberate Fire Support Planning. Deliberate fire support planning techniques are used when the situation is relatively well developed and time permits detailed step-by-step procedures.

As the planning process begins, the CO FSO develops targets based on the company commander's guidance, the terrain, and the tactical situation. The CO FSO assigns numbers to the targets from a block of numbers assigned by the battalion fire support officer. The sources of these targets may include the platoon FOs, direct observations, combat patrols, maneuver unit ground sensors, the maneuver commander, and the maneuver battalion FSO. The CO FSO then briefs the company commander on a plan for fire support for the company's operation.

When targets have been approved, the CO FSO transfers them to a target list. This informal document contains information needed by the receiving fire direction center (FDC) to quickly identify, process, and complete technical firing data for the indicated targets. The target list is then provided to the battalion FSO to facilitate coordination. It may be hand carried, transmitted by secure voice means, or transmitted through the FIST DMD to the battalion FSE. When the CO FSO transmits the target list to the battalion FSO by means of the FIST DMD, the targets can then be rapidly consolidated and transmitted to the DS battalion computer where the targets are scheduled for firing.

Target lists received by the battalion FSO from the CO FSOs are consolidated, and duplications are eliminated. CO FSOs are then informed of target list deletions, corrections, and/or modifications, to include changes in attack means.

Quick Fire Support Planning. Quick fire support planning techniques are used when time is limited. These techniques are standardized. They are extremely flexible. As in deliberate planning, the CO FSO develops targets and assigns target numbers to them. In quick fire support planning, however, the CO FSO assigns targets (and possibly a schedule of fires) to the most appropriate fire support means available to support the operation. In fast moving situations, targets may be developed/planned by the battalion FSO and passed to the CO FSO.

The battalion FSO coordinates fires while the CO FSO orchestrates the fire plan. In this type of fire support planning, the available time does not usually permit evaluation of targets on the target list, nor does it allow for consolidation with targets from related fire support coordination agencies.

In an operation for which quick fire support planning is conducted, a field artillery battery may be directed to provide fire support. The designation of a battery simplifies direct planning and coordination between the FIST and battery commander/FDC.

The quick fire support plan also applies to battalion and brigade levels of command. Battalion and brigade FSOs must be familiar with the techniques of quick fire support planning.

Fire Support Coordination

Essential to the successful execution of the fire support plan is fire support coordination. To facilitate fire support coordination, the FIST must:

- Advise the commander on all fire support matters. This is primarily the job of the FIST, but the platoon FOs with the platoon leaders may do this on a limited scale, commensurate with their knowledge and experience.

- Resolve any fire support conflicts that may arise during the planning and execution of the operation. Actions taken to avoid possible conflicts may include:

    - Ensuring that planned fires are not employed to the detriment of maneuver direct fire weapons.

    - Ensuring that the available platoon FOs use assets to the best advantage.

    - Competing for assets, and priorities of fire for those assets, when the company mission changes to a more difficult or more dangerous one.

- Attack targets in a timely manner with the most suitable fire support means available.

- Coordinate the operations of the platoon observers.

As the eyes of the artillery, the FIST must continually survey the battlefield. Observation of the battlefield and adjustments of indirect fires are traditional duties of the artillery observer. These jobs are more difficult now because of the introduction of new weapons and the increased mobility of threat forces. There will be numerous targets on the battlefield. Therefore, it is sometimes a matter of locating the most dangerous target among those that are present and ensuring that it is engaged first.

The FIST is an important target acquisition source in the division. The FIST members will pass targeting information to the FDC. This is done as soon as possible to ensure timely dissemination of the information and firing on suitable enemy targets.

Of particular importance to the division artillery is information of a counterbattery nature. This information concerns the enemy's indirect fire system. This information may be obtained through reports on shelling in the vicinity of the company position. It may also be obtained through actual sightings of enemy mortars, artillery, and observation posts. The FIST must also keep the artillery and mortars informed of the maneuver situation.

Such information is vital with respect to priorities of fire and to the safety and survivability of the company itself. The FSO has the most up-to-date intelligence and knowledge of the plans and missions of the artillery and mortar units. It is important that the FSO advise the company commander of any change in available fire support assets.

In addition to requesting and adjusting field artillery, mortars, and naval gunfire support, the FIST is responsible for controlling close air support (CAS) in emergency situations. The FIST will normally assist a ground or airborne forward air controller (FAC). The company fire support sergeant must be able to act as a CAS guide and request/control CAS in the absence of a FAC, the CO FSO, or company fire support. The A-4, A-7, A-10, AV-8, and F-16 aircraft can be controlled over FM frequencies. However, communications with all other aircraft must be relayed through the battalion tactical air control party or airborne FAC. The FIST is concerned not only with controlling the actual attack of the target. He must also keep the aircraft pilots informed of enemy antiaircraft weapons in the area. Also, he must warn pilots if there is any possibility of the aircraft flying through a contamination cloud of

either chemical agents or nuclear fallout. The goal of the FIST is to provide responsive, effective fire support to the maneuver company. With this goal in mind, the FIST chief must use his personnel and equipment assets to best accomplish the fire support tasks. The options for doing this not only depend on the tactical situation but, more importantly, on the knowledge and ingenuity of the FIST.

CO FSO

The CO FSO is the fire support coordinator (FSCOORD) at company level; he is responsible for fire support management at that level. He bases his actions on the needs of the supported force and on guidance from the maneuver force commander. The primary duties of the CO FSO are to:

- Serve as the FSCOORD for company/troop matters.
- Direct all types of fire support (primarily FA, mortars and CAS).
- Integrate fire support into battle plans.
- Resolve fire support conflicts, and eliminate duplication of effort within the company's zone of action.
- Assign target numbers.
- Plan, coordinate, and execute fire support in accordance with command guidance and the battlefield situation.
- Cue target acquisition assets attached to DS battalions when necessary.
- Keep FOs and the battalion FSO informed.
- Locate targets.
- Manage lasing operations.
- Report battlefield information.
- Advise the supported maneuver company commander on fire support matters.
- Establish and maintain CO FSO communications.
- Supervise the establishment and effectiveness of CO FSO communications.
- Serve as a FA liaison to supported units.
- Supervise, train, evaluate, and rate enlisted members of the team.
- Coordinate CO FSO activities.
- Operate the ground/vehicular laser locator designator (G/VLLD) when necessary.
- Be readily available, by physical location or by radio, so that the maneuver commander can quickly influence the battle with fire support assets.

Fire Support Sergeant

The fire support sergeant is the CO FSO's immediate assistant. As such, he must be able to perform the duties of the CO FSO and to:

- Prepare terrain sketches.
- Coordinate team activities as directed by the CO FSO.
- Supervise the maintenance of team equipment.
- Prepare and maintain fire support documents, records, and reports.
- Operate the FIST DMD and the G/VLLD.
- Establish and maintain FIST communications.
- Assist and substitute for the CO FSO.
- Supervise enlisted members of the team.
- Call for, adjust, and/or direct all types of fire support.
- Advise the supporting FA unit of the supported unit's plans.
- Supervise the establishment and effectiveness of FIST communications.
- Conduct and evaluate FIST training.
- Perform other FIST tasks as defined by the CO FSO.

Fire Support Specialist

The fire support specialist helps the CO FSO and the fire support sergeant in the performance of their duties. The primary duties of the fire support specialist are to:

- Help in fire support planning and coordination.
- Perform observed fire procedures.
- Prepare and maintain situation maps and overlays, and recognize and use map signs and symbols.
- Keep FO parties informed.
- Help set up, operate, maintain, and displace FIST equipment.
- Operate and maintain communication equipment.
- Assist in lasing targets.
- Prepare and disseminate target lists.
- Monitor requests for fire support.
- Keep the CO FSO informed.

Forward Observer (FO)

At platoon level, except in tank companies and armored cavalry troops, the FO acts as the eyes of the field artillery and mortars. As the maneuver platoon's fire support representative, the primary responsibilities of the FO are to locate targets and call for and adjust indirect fire support. To facilitate these actions, the FO must always be familiar with the terrain over which his platoon is operating and with the tactical situation at hand. Also, the FO must:

- Inform the FIST headquarters of platoon activities and the fire support situation.

- Prepare and use situation maps, overlays, and terrain sketches.

- Call for, adjust, and direct fire support.

- Operate as a team with the radiotelephone operator (RATELO).

- Select targets to support the platoon's mission based on an analysis of mission, enemy, terrain, troops available, and time available (METT-T).

- Select observation posts (OP) and movement routes to and from them.

- Establish and maintain communications as prescribed by the CO FSO.

- Operate the DMD.

- Determine and report the six-place grid coordinates of his location each time he moves.

The FO's success is based primarily on his familiarity with the terrain over which his supported platoon operates. Study of, and observation over, the zone of action of the supported force are necessary to acquaint the FO with his area of fire support responsibility. To facilitate his terrain knowledge, he can draw a terrain sketch consisting of prominent terrain features such as hills, bodies of water, buildings, roads, and depressions. Direct observation is the preferred method of studying the terrain. However, if direct observation is not advisable because of the tactical situation, a map reconnaissance is required.

To provide the right type of fire support at the correct time, the FO must be aware of the current and projected tactical situations. This is easier if he completely understands the force's scheme of maneuver. Joint maneuver and fire planning should be the standard method of planning.

In addition to being familiar with the terrain and the scheme of maneuver, the FO must also know the enemy's tactics and techniques, as well as his equipment capabilities and limitations. This knowledge will help the FO maximize the capabilities and minimize the limitations of the firing assets available to support him.

The tank commander is the FO for tank platoons and armored cavalry troops. He must be able to call for and adjust fires and make maximum use of planned targets to simplify calls for fire.

Radiotelephone Operator (RATELO)

As a member of the FO party and the FIST headquarters (HQ), the RATELO must be able to perform the duties of the FO at the maneuver platoon or those of the fire support specialist at the FIST. He must also be able to set up, operate, and maintain the FO or FIST headquarters' equipment.

In this learning event, you have learned the company/troop fire support team, their personnel, equipment, communications, and observation/lasing teams. You have seen how they function together. In the next learning event, you will learn how the battalion/task force fire support section is organized and functions.

Learning Event 4:
IDENTIFY THE ORGANIZATION, EQUIPMENT, COMMUNICATIONS, AND FIRE SUPPORT PLANNING AND COORDINATION FUNCTIONS OF THE BATTALION/TASK FORCE FIRE SUPPORT SECTION, AND THEIR FIRE SUPPORT PLANNING CONSIDERATIONS AND PROCEDURES

At battalion and higher level, fire support coordination is provided by the fire support element. The fire support coordination facility must be located either with or near the maneuver operations center to permit the rapid exchange of information. Liaison representatives from other services may also be located at the fire support element.

THE BATTALION FIRE SUPPORT SECTION

A full-time fire support section (FSS) operates at each maneuver battalion-size headquarters. It establishes and maintains the fire support element (FSE) for the battalion. The FSO is in charge of the FSS. He is the principal advisor to the force commander on fire support matters. As such, he supervises the FSE and the activities of representatives from other fire support systems available to the force.

Supporting field artillery provides the fire support sections for infantry, mechanized infantry, and tank battalions. Each cavalry squadron (air to ground) may have an FSS organic to its headquarters and headquarters troop (HHT). The FISTs and FSSs for the battalion of the combat aviation brigade (CAB) are organic to the battalions/squadrons of the brigade. In the air assault division, the FSSs for the air cavalry squadron and attack helicopter battalion are organic to division artillery headquarters and headquarters battery (HHB).

The battalion FSE is located with the operations element of the supported force. This allows fire support to react quickly to the needs of the supported unit. Key personnel in or collocated with a maneuver battalion FSE during the planning and/or execution of the operation may include:

- The FSO.
- A representative from the heavy mortar platoon.
- An air liaison officer (ALO).

- A naval gunfire liaison officer (NGLO).

- A supporting engineer platoon leader.

- The battalion chemical officer.

The battalion or task force S3 air is not a full-time member. However, he has responsibilities that cause him to function as a member of the fire support element. The representatives from the fire support agencies are the links to their supporting weapons systems. The location of these individuals within the FSE allows the FSO to keep each agency informed and to quickly pass requests for their fires.

Personnel and Equipment

Table 3, below, shows the composition of battalion fire support sections, by type.

UNIT	PERSONNEL			EQUIPMENT	
	NUMBER	RANK	TITLE	NUMBER	ITEM
Mechanized Infantry/ Armored Battalion Fire Support Section	1 1 1 1	CPT E7 E4 E4	Fire support officer Fire support sergeant Fire support specialist Personnel carrrier driver	1 1 1 1 1 1 1	Command post (CP) carrier M577 1 1/4-ton truck (HMMWV) FIST DMD DMD Radio set AN/VRC-47 Radio set AN/VRC-49 Variable format message entry device
Light Infantry Battalion Fire Support Section	1 1 2	CPT E7 E4	Fire support officer Fire support sergeant Fire support specialist	1 1 3	HMMWV Radio set AN/GRC-160 Radio set AN/VRC-46
Infantry Battalion Fire Support Section	1 1 2	CPT E7 E4	Fire support officer Fire support sergeant Fire support specialist	1 1 1 3 1	HMMWV Variable format message entry device Radio set AN/PRC-77 Radio set AN/VRC-49 FIST DMD
Regimental Cavalry Squadron Fire Support Section	1 1 2 1	CPT E7 E4 E3	Fire support officer Fire support sergeant Fire support specialist Single-channel radio operator	1 1 1 1 1 1 1 1	CP carrier M577 1 1/4-ton truck (HMMWV) Radio set AN/GRC-160 Radio set AN/VRC-49 Radio set AN/GRC-106 Variable format message entry device FIST DMD DMD

TABLE 3. BATTALION FIRE SUPPORT SECTIONS.

COMMUNICATIONS

Each fire support section establishes and maintains communications with both the supported unit and the supporting field artillery. Assigned radios with variable format message entry devices (VFMED) are the primary means of communication; however, wire communications should be used whenever practical. The VFMED with ancillary equipment is a two-way device providing for encryption, transmission, receipt, acknowledgment, and decryption of messages. The VFMED permits the FSS to transmit and receive information from a TACFIRE computer and to use its processing capabilities.

The VFMED is not a computer. It has a line printer, so hard-copy messages can be received. The FSS also is issued a FIST DMD. This gives the FSO or his representative the capability to monitor fire requests and fire missions on a real-time basis, even when he is away from the FSE. He can inject his guidance before a mission is fired. When the FSO is not located at the FSE, he can use the CO FSO DMD, when available, to communicate with the digital system.

BATTALION/TASK FORCE-LEVEL FIRE SUPPORT PLANNING AND COORDINATION

As the maneuver battalion FSE, the fire support office has access to field artillery, heavy mortars, air support, and perhaps other fire support means for which planning and coordination are needed (figure 8).

Planning and Coordination Procedures

The fire support officer at the maneuver battalion FSE monitors requests for fires from the FISTs under his supervision. Target lists from the FISTs are consolidated and duplications are eliminated. The consolidated list is distributed to all the FISTs. When the fire support means available at the company level are inadequate, the FSO coordinates requests for additional fire support. The FSO also plans fires in accordance with the task force commander's guidance. Normally, the FSO will plan targets in depth and other targets that were not planned by the FISTs but are within the battalion's zone of action. This fire planning by the FSO begins on receipt of the maneuver battalion's mission and before the FSO's briefing to the FISTs or submission of the targets by the FISTs to the FSO. When a mission is received or generated, the FSO analyzes the target to determine if, when, how, and with which means it should be attacked. He does this on the basis of attack guidance provided by the commander.

FIGURE 8. BATTALION- LEVEL COORDINATION.
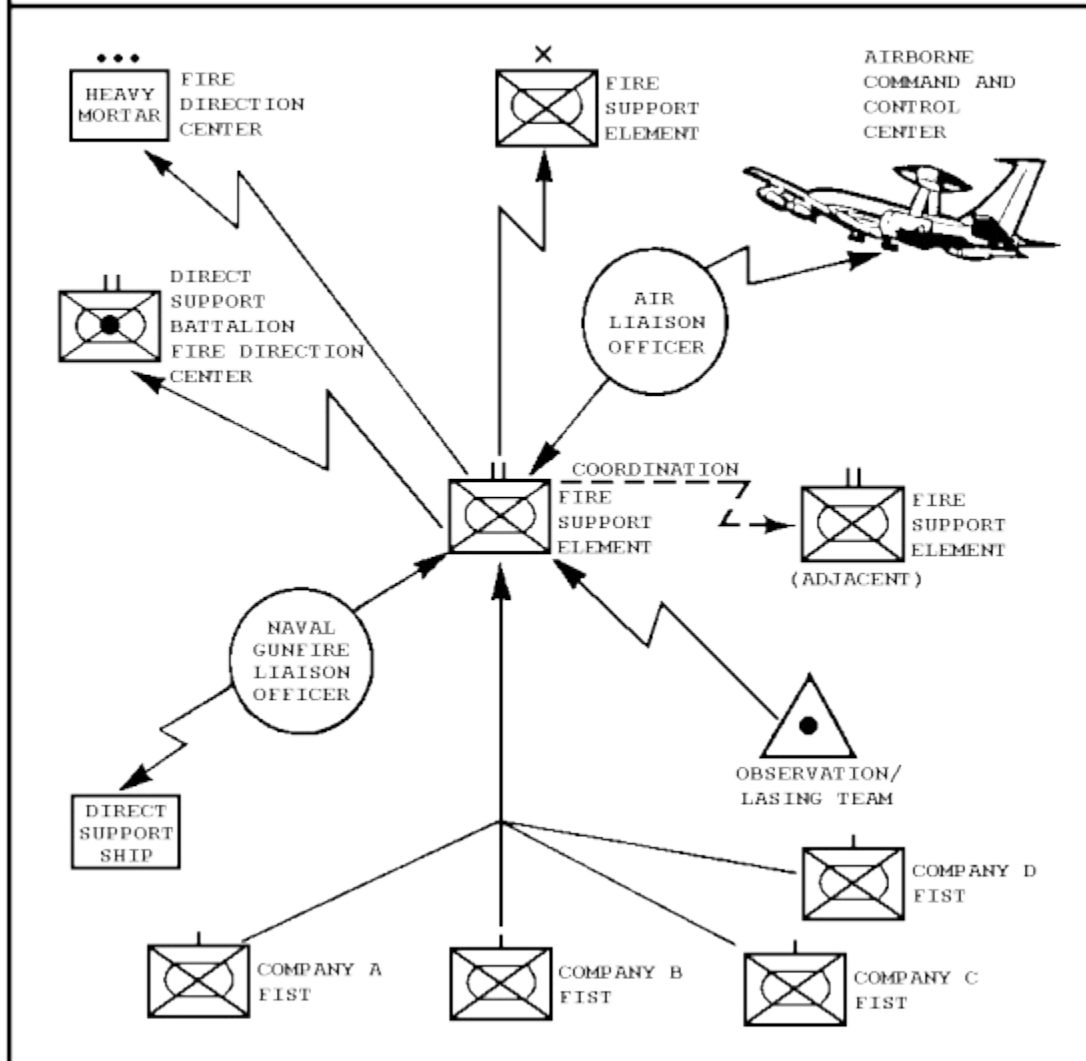
Attack guidance is that information specified by the commander, and magnified by his operations staff and FSCOORD, to detail how and when targets should be attacked. It includes any restrictions on engagement, use of munitions, or use of fire support means. Targets are grouped into those that should be attacked immediately (even if other attacks have to be interrupted), those that should be engaged as acquired and as assets become available, and those that should be planned for future scheduled fires. Targets may be protected from destructive fires to enhance deception or to permit collection of information.

The FSO's efforts result in the battalion fire support plan. Once the FSO has developed the fire support plan, he briefs the battalion commander/S3 to obtain approval or further planning guidance. The battalion FSO then completes coordination with affected agencies (to include the close support battalion, all FISTs, and the brigade FSO). As a minimum, the FSO will transmit a complete consolidated target list to each FIST.

AMMUNITION CONSIDERATIONS

Ammunition capabilities must be considered in the development of both the scheme of maneuver and the fire support plan. Conventional and improved conventional munitions (ICM) are planned at the limits of visibility to disrupt enemy assault formations. With Copperhead, the coordination of these fires is particularly important. Their effects must not interfere with designator lines of sight during the critical Copperhead engagement period. During the planning process, the task force commander issues target attack guidance.

This guidance is incorporated in plans and orders by the task force (TF) staff and FSO and is communicated to company/team commanders and their CO FSOs. They disseminate the plans and orders to the platoon leaders, G/VLLD operators, and attached combat observation/lasing teams (COLTs). When a COLT is attached to a maneuver battalion, the FSO, using the maneuver commander's guidance, may either emplace it himself or further attach the team to company level under the control of a FIST. The FSO makes a reconnaissance of the terrain in and around the engagement areas selected by the task force commander. On the basis of this knowledge of company/team battle positions, engagement areas, and the proposed battery (btry) positions furnished by the brigade FSO or DS artillery battalion S3, the task force FSO coordinates Copperhead footprint coverage. Using the task force commander's attack guidance, the FSO coordinates the CO FSO's selection of preliminary Copperhead aimpoints (figure 8).

Mortar Employment Considerations

When the heavy mortars of the battalion are selected to attack a target, the FSO assigns the mission directly to the mortar platoon fire direction center and notifies the FIST in whose zone the target lies.

Naval Gunfire and Close Air Support Employment Considerations

The selection of naval gunfire or CAS to attack a target requires a concise directive to the NGLO or ALO at the fire support element. These liaison representatives communicate the requests to their respective agencies. A request for an immediate air support mission is sent by the ALO directly to the air support operations center (ASOC) at the corps headquarters or to the airborne command and control center (ABCCC). Intermediate fire support elements (brigade and division) monitor the request, acknowledge its receipt, and intercede only to disapprove or amend the requests. Requests for preplanned air fire support go through Army channels to the S3 air at corps. When air support is requested, the FSO must initiate a request for suppression of enemy air defense (SEAD) fires to support the friendly aircraft. This request will include locations of known or suspected enemy surface-to-air defenses around the target.

Having tasked a specific fire support means, the fire support officer coordinates the linkup of the attack means with an appropriate FIST, aerial observer, forward air controller, or NGF spotter.

The fire support officer must coordinate with the appropriate fire support facility to attack targets outside battalion boundaries or within the constraints imposed by other fire support coordinating measures.

Automated Field Artillery Planning Considerations

When field artillery is selected to attack a target, the battalion FSO uses the VFMED or FIST DMD to request and coordinate fires. Fire request and coordination channels are the same in both digital and manual environments. When digital means are used, although the FSO can no longer monitor fire requests made on the DS battalion fire direction net, he is still informed of all the fire missions by a message of interest (MOI) to him. The TACFIRE computer MOI function automatically transmits copies of all fire requests sent by the FSO's assigned observers. The FSO can then intervene verbally if he wishes to cancel or change the mission. The FSO also receives copies of any fire requests made in his unit's zone of action. In this way, fires across unit boundaries can be rapidly coordinated.

BATTALION/TASK FORCE SPLIT TOC OPERATION

As an option for command group employment at the battalion/task force level, a commander may temporarily control operations from a forward (tactical) command post. To do this, he may use a command group. Its composition will depend on the situation and the desires of the commander. When the task force commander is forward, the field artillery FSO will go with him to expedite fire support operations. The fire support sergeant will remain at the TOC (main CP) to plan, coordinate, and shift fires/fire support coordinating measures. Effective communications must be established linking fire support personnel who have gone forward with those at the main CP. When the fire support element (FSE) is equipped with a FIST DMD, the fire support personnel forward with the command elements should carry the device. This will facilitate digital communications and access to TACFIRE. The FSO may also intercede at any time by means of voice radio to issue instructions to the FSE or to make modifications based on the tactical situation. This includes instructions to supporting heavy mortars. Given current force structures, the maneuver commander must prioritize battalion-level FSS use. This is because present force structures do not facilitate fire support planning and coordination for prolonged periods of time during split operations. Such limitations should be passed to the commander in the form of staff estimates.

CONCLUSION

During this lesson, you have learned the fire support planning and coordination are functions of the maneuver commander; the elements of the fire support team organization and employment of FIST communications; the duties of FIST and the battalion fire support element personnel; the requirements and techniques of company-level fire support and battalion/task force-level fire support planning and coordination. If you feel comfortable with your knowledge in these areas, you can test yourself by completing the practice exercise.

Lesson 1

Practice Exercise

Instructions The following items will test your understanding of the material covered in this lesson. There is only one correct answer for each item. When you have completed the exercise, check your answers with the answer key that follows. If you answer any item incorrectly, review that part of the lesson which contains the portion involved.

SITUATION

You are a maneuver battalion commander conducting offensive operations. You are planning, coordinating, and integrating fire support.

PART I

1. As the maneuver battalion commander, your guidance to the FSO is to integrate all fire support and maneuver assets

    ○ A. by retraining one third of his artillery assets in reserve.

    B. to maximize combat power for the combined arms team.

    C. to deny the enemy freedom of maneuver.

2. As the maneuver battalion commander, your guidance to the FSO is that fire support will normally be

    A. delivered by the lowest level having effective means available.

    B. provided by 155-mm fires.

    C. controlled by FIST elements attached to the FSE.

PART II

3. You are a maneuver battalion commander and as part of your indirect fire planning with your FSO, you discuss your scheme of maneuver. Additionally, you should

    A. state your target priorities and the effects you want to achieve.

    B. inform him that you will place your organic FIST elements under his operational control (OPCON) for offensive operations.
    C. provide him the communications equipment needed for his operations.

4. You are a maneuver battalion commander. You have been ordered to attack and seize a position occupied by a company-sized enemy unit. To destroy this enemy force, you must

    A. suppress the enemy in the target area.

    B. destroy all enemy hard material targets.

    C. create a 30 percent or more casualty rate.

5. As a maneuver battalion commander, you have been ordered to attack and seize an enemy position. Your guidance to the FSO is that the first priority of targets

    A. is given to targets which can interfere with the battle plan.

    B. is assigned to targets which can prevent execution of battle plan.
    C. will be assigned on a fire mission basis.

PART III

6. As a mechanized company commander, FIST teams greatly enhance your ability to provide fire support for your unit. The CO FISTV laser capabilities for range finding and for designating targets for attack with precision guided munitions

    A. brings a new dimension to fire support.

    B. gives you the ability to guide all munitions to the target.

    C. increases communications with the two-way digital message device.

7. You are a maneuver company commander. To plan and coordinate your fires, you will

    A. rely on information provided in the battalion fire support plan.

    B. coordinate with the FSO.

    C. coordinate with the FIST.

PART IV

8. You are a maneuver battalion commander planning an offensive operation. To plan naval gunfire support, you

    A. coordinate with the brigade FSO.

    B. coordinate with your DS artillery commander.

    C. coordinate with the NGLO in your FSE.

9. You are a company commander planning indirect fire support with the FSO. The plan includes the use of Copperheads. Their effects

    A. must not interfere with planned DS artillery targets.

    B. must not interfere with designator lines of sight during engagement periods.
    C. must not interfere with planned mortar targets.

LESSON 2

TACTICAL FIRE SUPPORT PLANNING

TASK

Identify considerations and procedures for planning fire support for the tactical operations of maneuver units.

CONDITIONS

Given the subcourse material for this lesson, a training scenario and extracts, as applicable, the student will complete the practice exercise at the end of the lesson.

STANDARD

The student will demonstrate his knowledge and comprehension of the task by identifying considerations and procedures for planning fire support for the tactical operation of maneuver units.

REFERENCES

FM 6-20

FM 6-20-30

FM 6-20-40

FM 6-20-50

FM 6-30

GENERAL

Success on the AirLand Battlefield depends on the careful integration of fire support assets into the simultaneous battles in the deep, close, and rear areas. In the process of integrating fire support into operations, the most important considerations are adequacy, flexibility, and continuity.

In this lesson, you will learn about the fire support planning considerations and procedures for both offensive and defensive operations. You will also learn these considerations and procedures as they apply to retrograde operations, to military operations on urbanized terrain (MOUT), and to the use of illumination and smoke munitions.

The lesson will end with a discussion of the characteristics and phases of preparation fires and the purposes and techniques of quick fire support planning.

In offensive operations, the main attack receives priority of fire support while long-range systems strike defenses in depth, enemy reserves, or targets such as command posts, bridges, and defiles. In the defense, a greater balance of fire support is necessary, but anticipated areas of the enemy's main effort are allocated stronger fire support. The FSCOORD ensures that these primary considerations are observed by carefully weighing fire support tasks required for maneuver operations. These general fire support tasks are listed in table 4, below.

TABLE 4. GENERAL FIRE SUPPORT TASKS.

A list of situation-and echelon-independent fire support tasks for consideration by all FSCOORDs is shown below.

- Advise supported commander on all aspects of fire support.
- Prioritize fire support to weight main attack or most vulnerable area.
- Aggressively attack high-payoff targets.
- Interdict follow-on forces.
- Provide counterfires.
- Target and request SEAD fires when necessary.
- Locate and attack targets beyond the range of direct fire weapons.
- Establish and manage the fire support facility.
- Maintain current status of fire support with fire support agencies in the battle area.

- Disseminate fire support plan to appropriate agencies.
- Assist in coordinating the positioning of fire support units and elements.
- Recommend fire support coordinating measures.
- Gather target information and disseminate it to higher, lower, and adjacent fire support agencies.
- Coordinate all fires in the zone of the supported maneuver commander.
- Resolve fire support conflicts.
- Locate forward deployed enemy artillery.
- Support contingency operations.

Learning Event 1:
IDENTIFY THE FIRE SUPPORT PLANNING CONSIDERATIONS AND PROCEDURES FOR OFFENSIVE OPERATIONS

The primary purpose of an offensive operation is to destroy the enemy. This is done by breaking through his defenses and driving rapidly and violently to his rear area. Other purposes of the offense are to:

- Secure key or decisive terrain.
- Deprive the enemy of resources or decisive terrain.
- Gain information.
- Deceive and divert the enemy.
- Hold the enemy in position.

GENERAL OFFENSIVE CONSIDERATIONS

The offensive AirLand Battle involves both close-in and deep targets for the fire support system. In addressing fire support for the offense, the FSCOORD should focus on these functional areas or considerations:

- Fire support tasks.

- Command and control.

- Fire support planning and coordination.

Fire support tasks will be discussed first.

Fire Support Tasks

One task of fire support in planning offensive operations is to support the movement to contact or meeting engagement by:

- Providing immediately responsive fires to leading elements.

- Attacking deep targets with massed indirect fires and air support.

- Employing active and aggressive counterfire to allow freedom of maneuver.

Another fire support task is to soften enemy defenses before the attack. This is accomplished by engaging enemy:

- Indirect fire weapons, systems, and OPs.

- Reserves and command and control facilities.

- Logistics and assembly areas.

- Communications facilities.

- Frontline defenses.

Another fire support task is to provide support during the attack by using all available fire support means to destroy, neutralize, or suppress high-payoff targets and other targets that could impede or react to the attack.

Fire support tasks also include the planning of fires during consolidation to:

- Protect friendly units as they reorganize.

- Break up enemy counterattacks.

- Prevent enemy reinforcement, disengagement, or resupply.

Command and Control

In the offense, the attacker has the initiative and can concentrate maneuver forces and firepower at the time and place of his choosing. The maneuver commander considers decentralizing control of fire support to ensure that immediately responsive fires are available to his subordinate units.

Fire Support Planning and Coordination

A third general offensive consideration is the planning and coordination of fire support. In this functional area, it is important to:

- Make fire support planning and coordination as detailed as possible before the attack.
- Make planning and coordination informal and flexible during the operation.
- Plan only essential targets (do not "measle sheet").
- Consider careful employment of coordinating measures to avoid interfering with friendly forces.
- Use permissive measures well forward to preclude endangering friendly forces.
- Use on-order measures to enhance flexibility.
- Use preparations, smoke, and series and groups of targets.
- Use all available target acquisition resources and process information responsively.
- Provide continuous complete coverage within the zone of operation.
- Position indirect fire weapons well forward.
- Begin forward displacements early to keep pace with maneuver forces.
- Stress the use of wire communications. When the attack has begun, use radio as the primary communications means.
- Use COLTs on flanks to provide early warning, observation, and lasing capability for Copperhead and other terminal homing munitions.
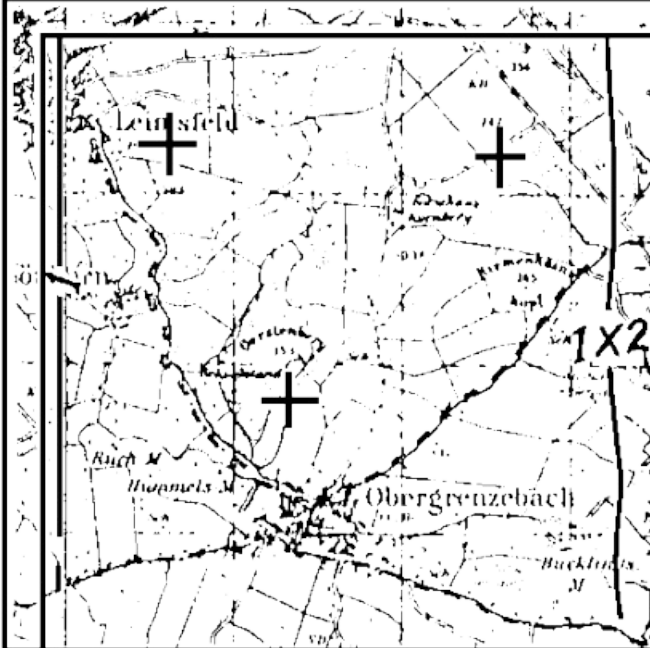
Types of Offensive Operations
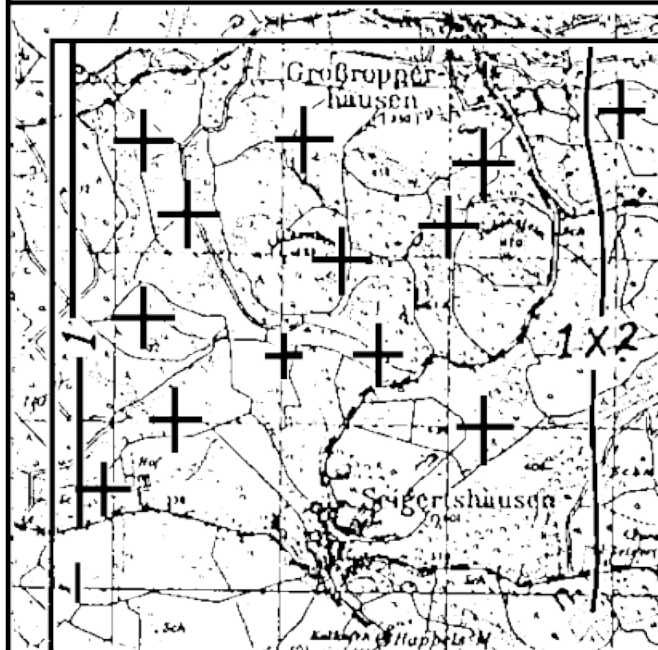
The five basic types of offensive operations are:

- Movement to contact.
- Hasty attack.
- Deliberate attack.
- Exploitation.
- Pursuit.

FIGURE 9.   ESSENTIAL TARGET OVERLAY
VS. "MEASLE SHEET."

ONLY ESSENTIAL
TARGETS SHOWN

TOO MANY TARGETS SHOWN
(MEASLE SHEET)

Other types of offensive actions that may require fire support using related techniques include:

- Reconnaissance in force.

- Raid.

- Feint.

- Demonstration.

MOVEMENT TO CONTACT

Contact with the enemy or to regain lost contact movement to contact is an offensive operation designed to gain initial ground. The primary consideration in preparing for movement to contact is anticipating actions during the movement and deploying in a manner that affords the greatest possible security to the main body while facilitating quick, strong reaction when contact is made.

During the movement to contact, standard mission assignments will normally be used. In certain situations, however, the brigade commander may want to provide additional weight to the forward maneuver company. In such situations, a dedicated battery may be considered. Use of a dedicated battery necessitates extremely close coordination between the supported unit and the dedicated battery.

In movement to contact, the FSO is especially concerned with ensuring that each leading team has immediately responsive fire support, and with planning fires to support the task force as a whole.

FSCOORD Considerations

FSCOORD considerations unique to the movement to contact include fire support tasks, command and control procedures, and fire support planning and coordination.

Fire Support Tasks. In considering fire support tasks, the FSCOORD should:

- Provide immediately responsive fires to the leading company.

- Attack deep targets with massed fires and close air support.

- Plan for hasty attack contingencies.

- Use a COLT with the lead company to provide additional responsive lasing capability for range determination and target designation.

Command and Control. Command and control considerations of the FSCOORD during movement to contact includes:

- Using extreme decentralization.

- Using nonstandard mission assignments to increase response.

<u>Fire Support Planning and Coordination</u>. In planning and coordinating fire support for movement to contact operations, the FSCOORD should:

- Place some available CAS on ground alert.

- Streamline request procedures to enhance responsiveness.

- Plan on-order fire support coordinating measures well beyond the line of departure (LD).

- Position fire support assets well forward to exploit the ranges of weapons systems.

How to Support a Battalion/Task Force Moving to Contact

Figures 10 through 14 show an example of the steps required to support a battalion/task force moving to contact.

FIGURE 10. HOW TO SUPPORT A BATTALION/TASK FORCE MOVING TO CONTACT #1.

TF 1–10 Armor, as part of 1st Brigade, has the mission to attack to seize Objective FIRECRACKER (in the vicinity of Hill 297) and prepare to continue the attack or assist passage of 3d Brigade elements in zone. Intelligence indicates the task force will encounter scattered security forces shortly after the task force crosses the line of departure. The commander will bypass or destroy those isolated elements and continue rapidly to his objective (obj). The generally open and rolling terrain in his zone permits rapid movement and excellent observation, but good cover and concealment are limited. For this mission, the task force has the following fire support assets:

- ■ One battalion mortar platoon.

- ■ Access to the DS FA battalion and through it to the reinforcing FA battalion.

- ■ CAS on call.

The task force commander analyzes his mission and war-games courses of action with his S3 and FSO. He decides to attack with two tank-heavy teams leading with one tank company and one mechanized team following. The lead teams will move out in bounding overwatch posture, capitalizing on terrain to conceal their movement.

With his FSO, the TF commander discusses fire support to be planned not only to suppress likely enemy positions but also to prioritize the use of smoke to screen movement of bounding elements where terrain does not provide concealed routes.

> **Note.** *The FSO must obtain the maneuver commander's priorities for use of any unique ammunition that may not be available in sufficient quantities to ensure availability during critical periods.*

The commander also anticipates the requirement for team hasty attacks and possibly a battalion hasty attack en route to his objective. At the recommendation of his FSO, he directs massed fires be planned on Hill 280 as well as Hill 287 and Hill 285, where he expects to make hasty attacks.

The commander and FSO also determine other targets deemed critical to the force to provide a framework for the remainder of the battalion fire support plan. These targets and those planned by company/teams will be given target numbers allocated to the task force. The numbers will be disseminated to subordinate elements and fire support units.
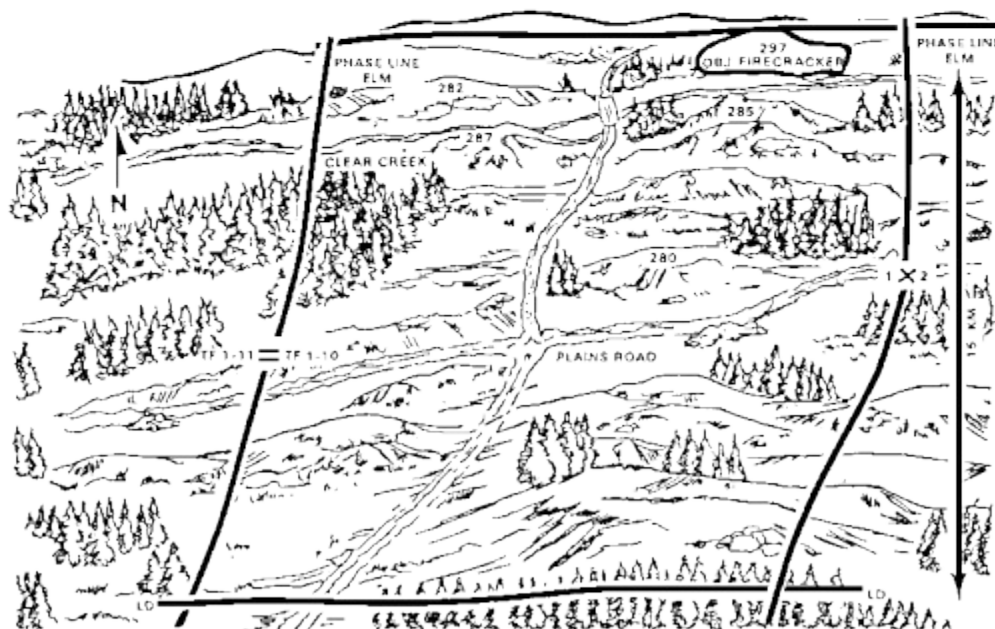
FIGURE 11. HOW TO SUPPORT A BATTALION/TASK FORCE MOVING TO CONTACT #2.

The TF commander decides to conduct a hasty attack against what he believes to be a reinforced enemy platoon defending near Checkpoint 18. He decides to envelop from the east around Checkpoint 18 with Teams B and C in column. Teams A and D are directed to continue their movement abreast and to seize key terrain near Checkpoints 15 and 20. Teams A and D are to provide a base of suppressing fire as needed against enemy pockets of resistance in the vicinity (vic) of Checkpoints 15 and 20 during the attack by Teams B and C. As the TF 1-10 hasty attack develops, the commander reports the situation to 1st Brigade. He also advises that his ALO is requesting air alert for a CAS mission to be used against anticipated armor reinforcements, spotted during an earlier air mission, coming from the northeast. To ensure that the attack is adequately supported, the FSO—

- Ensures that priority of FA fires is to the TF.

- Arranges to use FA high-explosive (HE) fires on Target AA2277 to suppress enemy direct fire gunners and provide screening smoke for the movement of Teams B and C to Hill 285 (Checkpoint 18).

- Plans on-call Target AA2090 (near Checkpoint 18) for later use in the objective area.

- Plans on-call Targets AA2091 (east of Checkpoint 18) and AA2092 (west of Checkpoint 22) to disrupt any enemy reinforcements.

- Coordinates the new planned targets with all FIST chiefs.

- Coordinates with the ALO to ensure that the air strike is integrated with other fire support.

An informal on-call airspace coordination area (ACA) is planned to facilitate the safe coordinated attack of targets by field artillery and close air support.
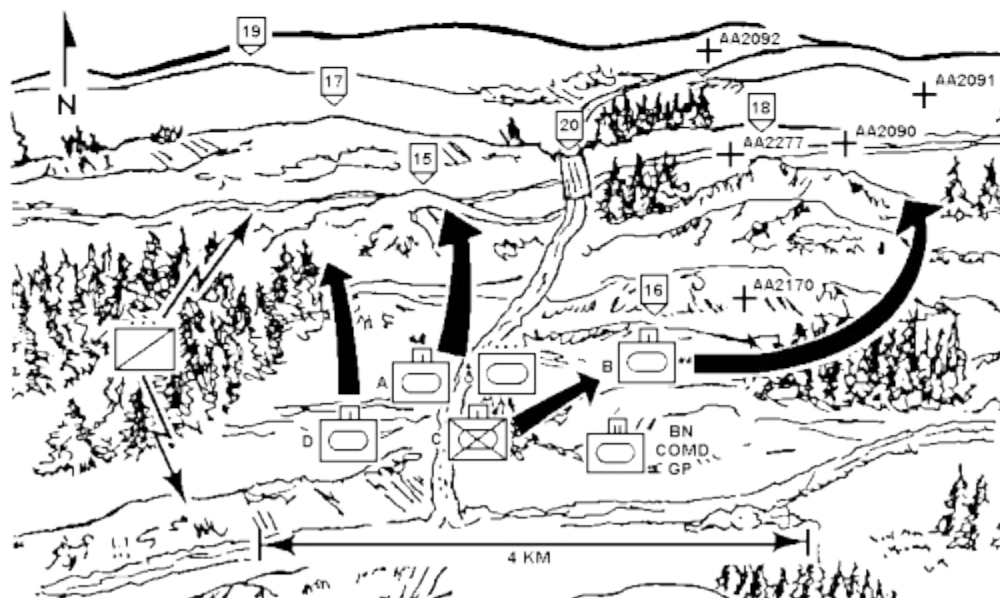
FIGURE 12.   HOW TO SUPPORT A BATTALION/TASK FORCE
MOVING TO CONTACT #3.

Team A begins to return fire while Company D maneuvers forward to seize the hill at Checkpoint 15 under cover of FA fires on Target AA2149. As the elements of Team A begin to maneuver toward Checkpoint 20, Teams B and C attack toward Checkpoint 18 under cover of mortar fire on Target AA2277. Enemy mortar fires begin falling on Team A and significantly interfere with the team's ability to move and to aim direct fires. Through the DS battalion FDC, the Team A FIST chief requests counterfire to silence the mortars. Meanwhile the Q-36 radar may be cued by the DS battalion operations section to help the DS battalion engage the mortars with timely and accurate fires.

FIGURE 13.   HOW TO SUPPORT A BATTALION/TASK FORCE
MOVING TO CONTACT #4.

As the attack proceeds, and on the basis of the team commander's guidance, Team B FIST shifts the battalion mortars from Target AA2277 to Target AA2092. A platoon FO from Team C adjusts artillery on Target AA2090 and shifts the fires northwest toward Target AA2092 as the team approaches Target AA2090. The Team C FIST chief has also called for FA HE and smoke on Target AA2091 to suppress light fire from that vicinity and to obscure enemy vision from that vantage point.

After coordinating with the task force commander, the battalion FSO calls for and adjusts smoke around Target AA2078 to further isolate the attack area. Team A and Company D add to the suppressive fire with tank fire toward Checkpoint 20 and Target AA2092. A field artillery aerial observer (FAAO) working for the DS FA battalion detects an enemy reinforcing element of 10 to 12 tanks moving southwest of Checkpoint 22. The close air support previously requested to attack the anticipated enemy unit is about 10 minutes out according to the ALO. The battalion FSO monitors the FAAO report of this enemy movement and requests that the DS FA battalion prepare to fire scatterable mines in front of and dual-purpose improved conventional munitions (DPICM) on the enemy column. The FAAO will control the mission.
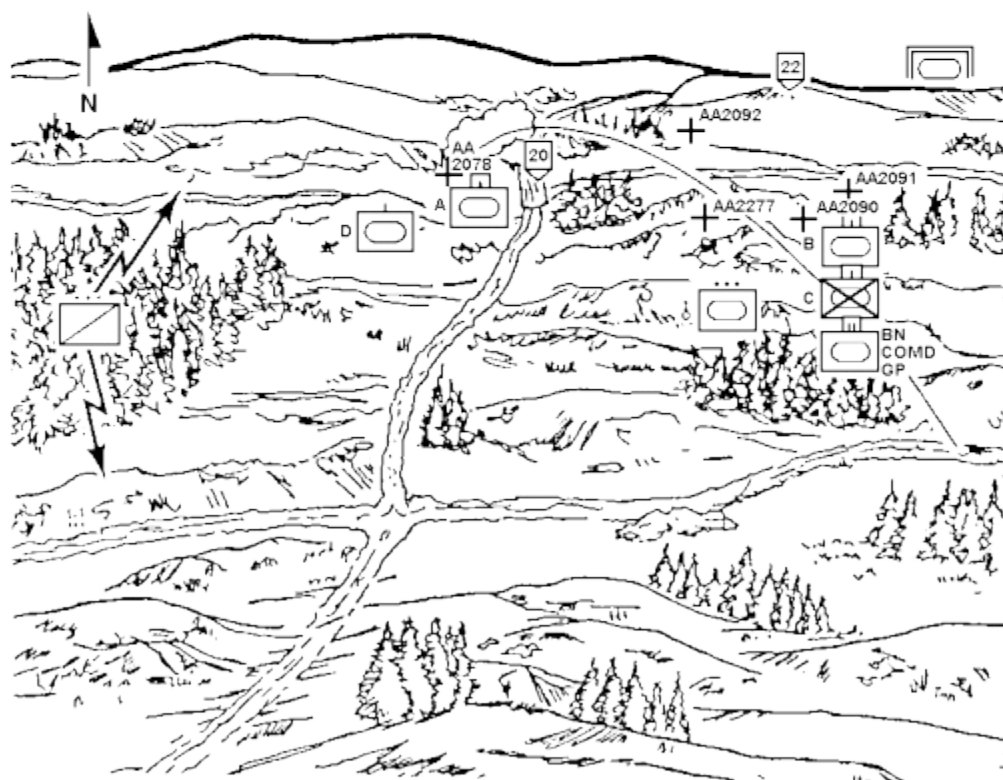
FIGURE 14.   HOW TO SUPPORT A BATTALION/TASK FORCE MOVING TO CONTACT #5.

The FAAO observes the column hugging the hill behind Checkpoint 22 and begins his mission by requesting one battery volley 500 meters northeast of Target AA2092. It appears that the column will pass between the wooded area (near Target AA2092) and the hill. On the basis of this judgment, the FAAO calls for an on-call volley from another battery 400 meters east of Target AA2092. The FAAO continues to adjust the two batteries along the route of movement of the tank column, causing tanks to button up and slow significantly. (Previous smoke and dust from HE fires continue to obscure vision from vicinity of Checkpoint 22 and Target AA2078.)

Fires continue on the intercept point until aircraft begin their approach. The FAAO identifies the target for the aircraft, and the on-call informal ACA is executed to facilitate aircraft safety. As the aircraft strike begins, the FAAO shifts FA fires 400 meters to another threat. He *does not stop* FA fires.
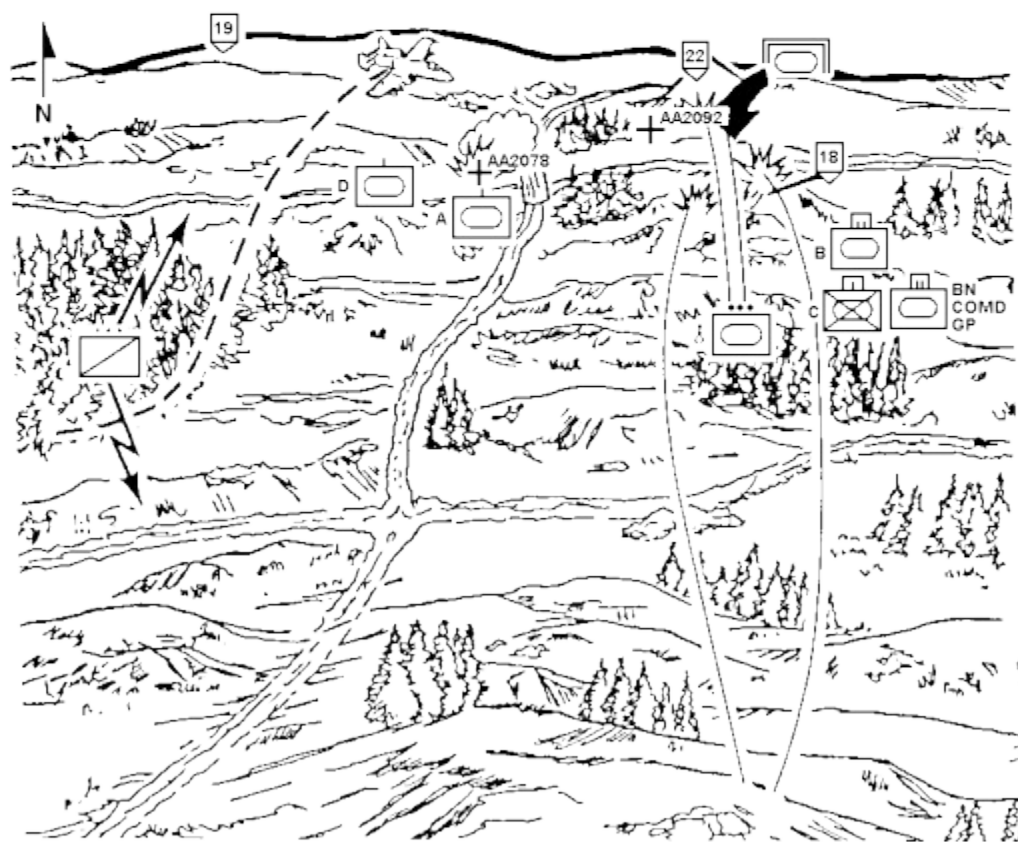
A hasty attack is an offensive operation usually conducted with minimum advanced planning after a movement to contact. It is conducted with the resources immediately available in order to maintain momentum.

A hasty attack requires responsive fire support to compensate for the relatively small amount of maneuver initially echelons forward. The commander must be prepared to use every available asset on the shortest possible notice. The speed of attack will offset a lack of thorough preparation. Once an attack is launched, however, the commander must commit every available element of combat support to the attack.

The hasty attack is a difficult operation. It seeks to fix the enemy's forward elements in place with firepower; to find gaps, weak spots, or open flanks; and to move quickly through those openings. Speed is essential, and fire support plays a key role in the hasty attack.

FSCOORD Considerations

The FSCOORD considerations unique to a hasty attack are listed in the following paragraphs.

<u>Fire Support Tasks</u>. In considering fire support tasks for a hasty attack, the FSCOORD should:

- Concentrate fires on enemy forward operations until friendly units cross the final coordination line (FCL) or until fires are lifted/shifted at the direction of the maneuver commander.

- Suppress enemy direct fire weapons.

- Screen friendly forces from hostile ground observation with smoke and white phosphorous (WP).

- Provide deep fires to close off the immediate battle area to enemy reinforcements and/or resupply.

<u>Command and Control</u>. The FSCOORD's command and control considerations for a hasty attack include:

- Issuing on-order mission to exploit successes.

- Using reinforcing and GSR artillery to augment the fires available to the attacking force.

<u>Fire Support Planning and Coordination</u>. The FSCOORD must plan and coordinate fire support. For a hasty attack, he should:

- Ensure priority of fires to lead elements.

- Plan and coordinate as primary targets those that suppress enemy direct fire weapons and obscure the enemy's vision.

- Plan a few well-placed on-call targets and use "shift from a known point" fire missions.

- Plan the use of scatterable mines to block and isolate the enemy.

- Plan fires to slow enemy breaching attempts across hasty minefields.

- Place a COLT with lead elements in the attack or as early warning on a flank.

- Update target information as the attack progresses.

- Plan interdiction fires to slow influx of enemy follow-on forces to the battle area.

- Position mortars far forward.

- Place some CAS on ground alert, if available.

DELIBERATE ATTACK

A deliberate attack is an attack planned and coordinated with all concerned elements on a basis of:

- Thorough reconnaissance.

- Evaluation of all available intelligence and relative combat strength.

- Analysis of various courses of action.

- Other factors affecting the situation.

It is generally conducted against a well-organized defense when a hasty attack is not practical.

FSCOORD Considerations

FSCOORD considerations unique to the deliberate attack are listed in the following paragraphs.

Fire Support Tasks. For a deliberate attack, the FSCOORD should:

- Provide immediately responsive fires to the lead attack force.

- Attack deep targets to block movements of reserves and follow-on forces.

- Support close-in and deep battles simultaneously.

- Concentrate fires on forward enemy elements until friendly forces cross the FCL.

- Mass fires to help create a "hole" in the enemy's defenses.

- Schedule fires to support maneuver phases of the operation.

Command and Control. FSCOORD command and control considerations for a deliberate attack are:

- Maintain a degree of centralization in order to mass fires expeditiously.

- Assign on-order missions to facilitate successes. A change in command relationship may be necessary for exploitation or pursuit.

● Position FA assets well forward to support the attack.

Fire Support Planning and Coordination. For a deliberate attack , as the FSCOORD plans and coordinates fire support, he should:

● Plan fires to suppress forces on the flanks of the penetration.

● Plan scatterable mines to block and isolate the enemy.

● Plan CAS to defeat armored vehicles.

● Place a COLT with leading elements or use for early warning on flanks.

● Plan naval gun fire (NGF) to defeat static hardened targets.

● Conduct detailed formal yet flexible, fire support planning before the operation.

● Use all available intelligence/acquisition sources.

● Plan coordinating measures beyond the line of departure and on order measures to implement as the attack progresses.

● Plan a preparation after considering the following factors:

  ● Will the loss of surprise be significant?

  ● Are there enough significant targets?

  ● Are there enough fire support assets (weapons and ammunition) to support the preparation?

  ● Can the enemy recover before the effect can be exploited?

EXAMPLE OF A BATTALION/TASK FORCE DELIBERATE ATTACK

Figures 15 through 19 are examples of a battalion/task force deliberate attack. The brigade commander's concept and guidance were as follows: TF 1-13 Armorer, TF 1-95 Mech, and TF 1-94 Mech attack to rupture enemy defenses and secure Objectives GOLD, SILVER, and LEAD, respectively. 1-22 Cav follows TF 1-13 initially; after the initial penetration, 1-22 Cav protects the left flank. As initial objectives are secured, TF 1-15 Armor bypasses TF 1-95 on the left and TF 1-14 Armor (picking up one mechanized company from TF 1-94) bypasses TF 1-95 on the right to continue the attack to secure objectives ZINC and IRON, respectively. On order, TF 1-13 continues the attack to secure Objective TIN. On order, brigade will continue the attack beyond Phase Line PICK or assist passage of the 24th Armored Division.

TF 1-95 Armor will pass through elements of 1st Brigade (TF 1-10), attack to secure Objective SILVER, and prepare to assist the passage of TF 1-14 and TF 1-15. The zone of TF 1-95 is as shown. The task force opposes two platoons initially and a third platoon about 3 kilometers into the element

and a company in the vicinity of PL PICK. Terrain in the zone is hilly and wooded initially, opening up more beyond Objective SILVER. The following fire support assets are available:

- One battalion mortar platoon.
- Priority of fires from 1-52 FA (155, SP).
- Four CAS sorties.

When the commander received his mission and began his planning, he went to the TF 1-10 CP with his S2, S3, and FSO to coordinate their passage of lines and gain information on the enemy and zone of action. The two TF FSOs discussed target information and fire plans currently in existence. They also discussed the use of TF 1-10 mortars to supplement fires available to TF 1-95 during the passage. Then the TF 1-95 command group moved to a forward observation post (OP) for a visual reconnaissance. On the OP, the S2 of TF 1-10 (stationary unit) briefed the group on the terrain, the best avenues of approach, and the enemy. The TF 1-95 commander evaluated this information and further analyzed his mission in that light. The commander, S3, and FSO then studied the overall situation to determine the best course of action for the attack. On the basis of the commander's estimate, a four-phase attack was developed.

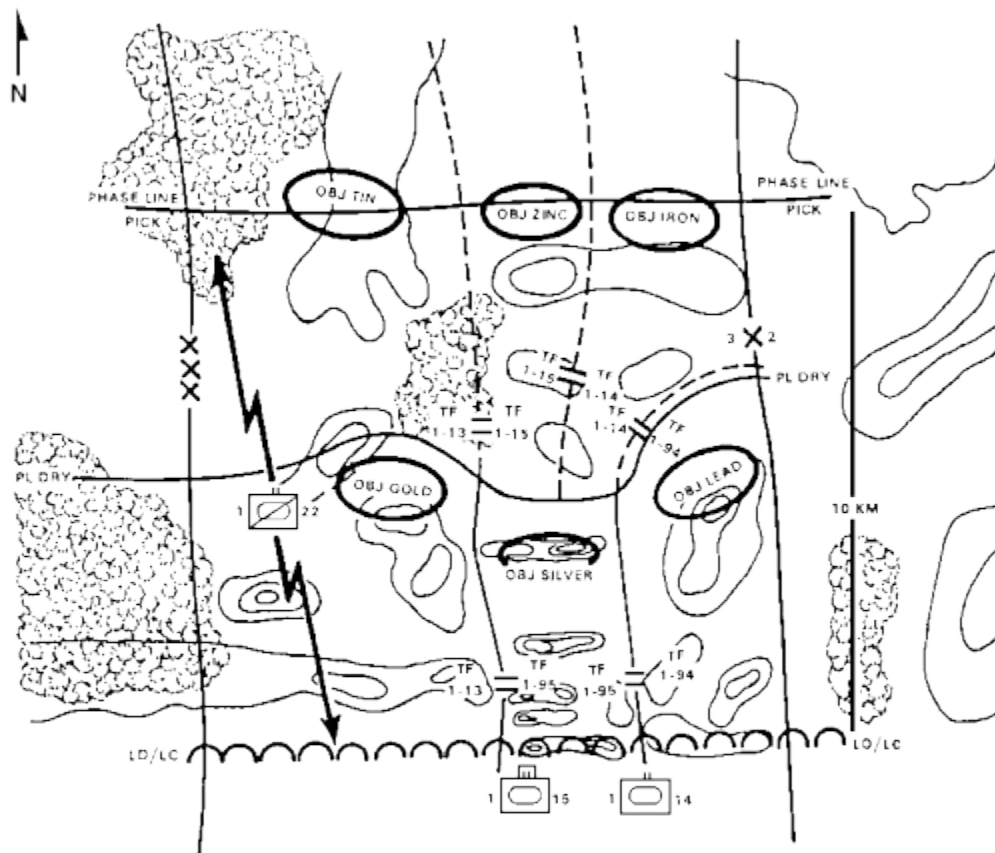FIGURE 15.   BATTALION/TASK FORCE DELIBERATE ATTACK

FIGURE 15A.   BATTALION/TASK FORCE DELIBERATE
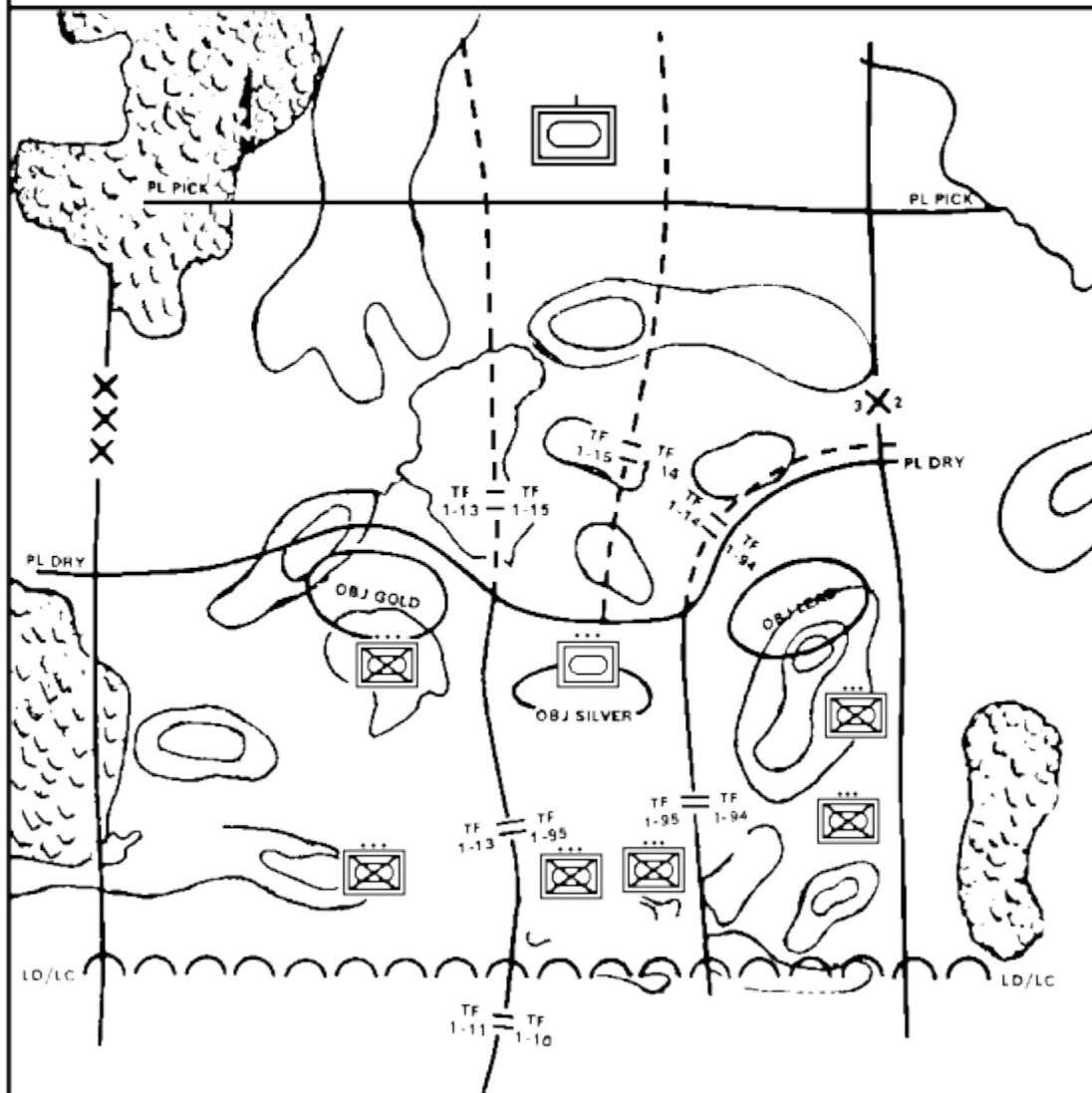ATTACK (continued)

FIGURE 16. FIRST PHASE OF BATTALION/TASK FORCE DELIBERATE ATTACK.

In *phase 1*, TF 1-95 crosses the line of departure with Team A moving to seize Hill 343 and Team B moving to seize Hill 329. Team C follows Team A and Company D follows Team B. Overwatch is provided by TF 1-10 elements. Suppressive direct fires from TF 1-10 hit Hill 357. Targets sent down from brigade include AC1010 through AC1014. As a result of his initial input to the preparation and subsequent war gaming, the battalion commander established Targets AC6651 through AC6653.

TF 1-95 will reach the base of Hills 343 and 329 just as the final rounds of the preparation are falling. The FSO will then shift HE fires to suppress the enemy on Hills 348 and 331. TF 1-10 battalion mortars will suppress enemy gunners on Hill 357 throughout phase 1.
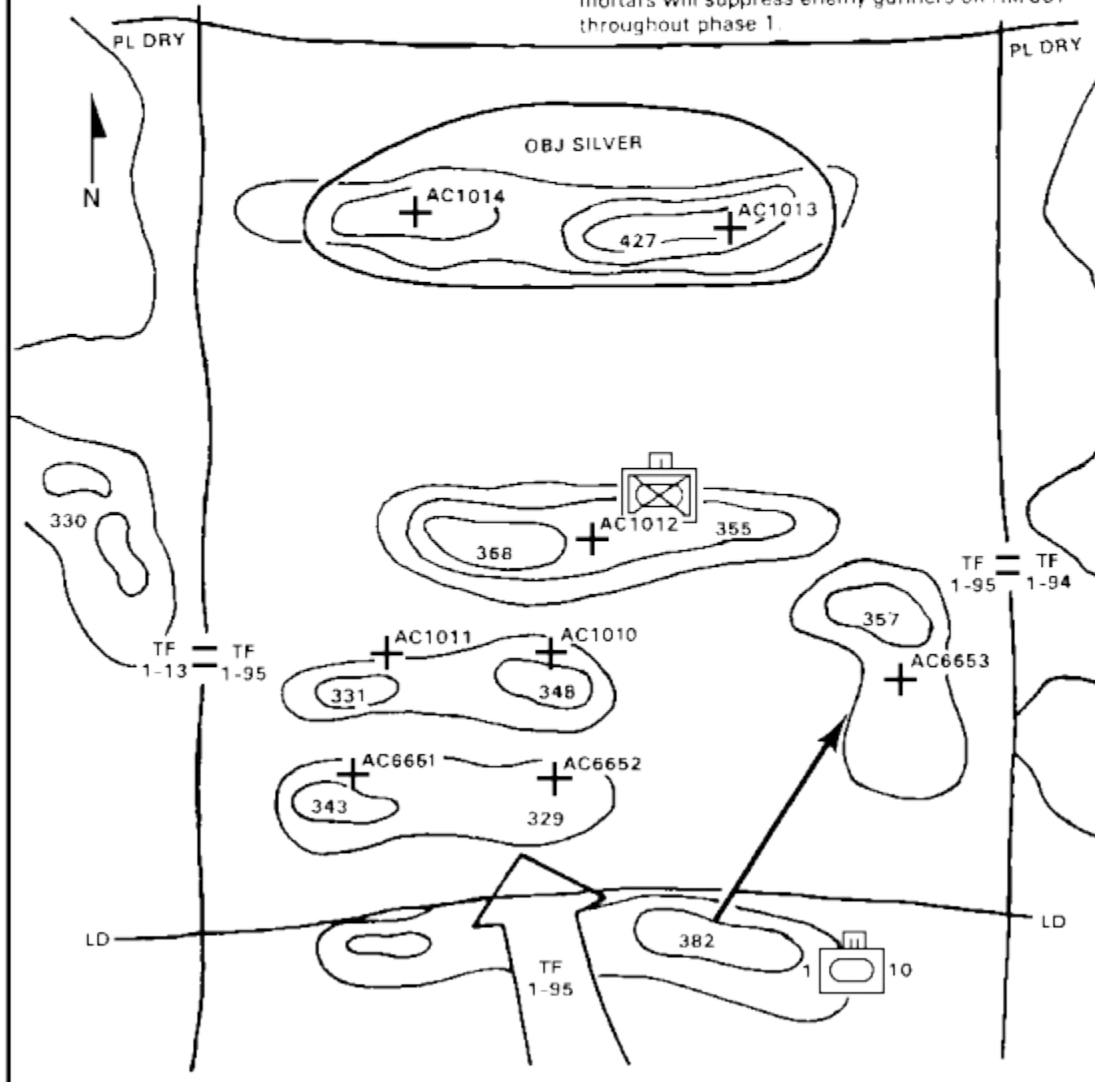
FIGURE 17. SECOND PHASE OF BATTALION/TASK FORCE DELIBERATE ATTACK.

In *phase 2*, Company D and Team B on Hill 329 will provide suppressive fires on Hill 348 as TF 1-10 continues to suppress forces on Hill 357 (Target AC6653). Two teams, A and C, will move around the left to envelop Hill 348 from the west.

A linear smoke target (AC6669) is planned to screen the envelopment. Smoke is also planned on Target AC6655 in TF 1-13 zone to obscure that area if TF 1-13 has not secured Hill 330. If that smoke is required, TF 1-95 FSO will coordinate directly with TF 1-13 FSO to clear the fires, ensure friendly troop safety, and avoid interference with TF 1-13 operations.

Note. *Because of ammunition limitations, the FSO must remain cautious concerning smoke use to ensure that smoke is available for those times in the operation that the TF commander deems most critical.*

As maneuver elements reach Hill 331, additional fires are placed on Hill 368 for suppression. Series HAWK is planned along the ridge between Hills 331 and 348 by adding three targets between AC1011 and AC1010. These will be phased from left to right to support the teams as they seize Hill 331 and move to Hill 348. The entire series can be fired or targets can be engaged separately.

FIGURE 18. THIRD PHASE OF BATTALION/TASK FORCE DELIBERATE ATTACK.

Phase 3 continues direct fire suppression from TF 1–10 on Hill 357. TF 1–95 has two teams suppress Hills 355 and 368 from Hill 348 while the remainder of the TF attacks through the valley to seize Hill 355 and Hill 368.

Heavy obscuring smoke is planned on Hill 357 to cover this movement and to assist minefield/obstacle breaching required en route to Hills 355 and 368. At the same time, enemy positions on Hills 368 and 355 are suppressed by battalion mortars and field artillery fires. Suppressive fires on Hill 355 will be shifted to Objective SILVER (Targets AC1013 and AC1014) at the last minute.
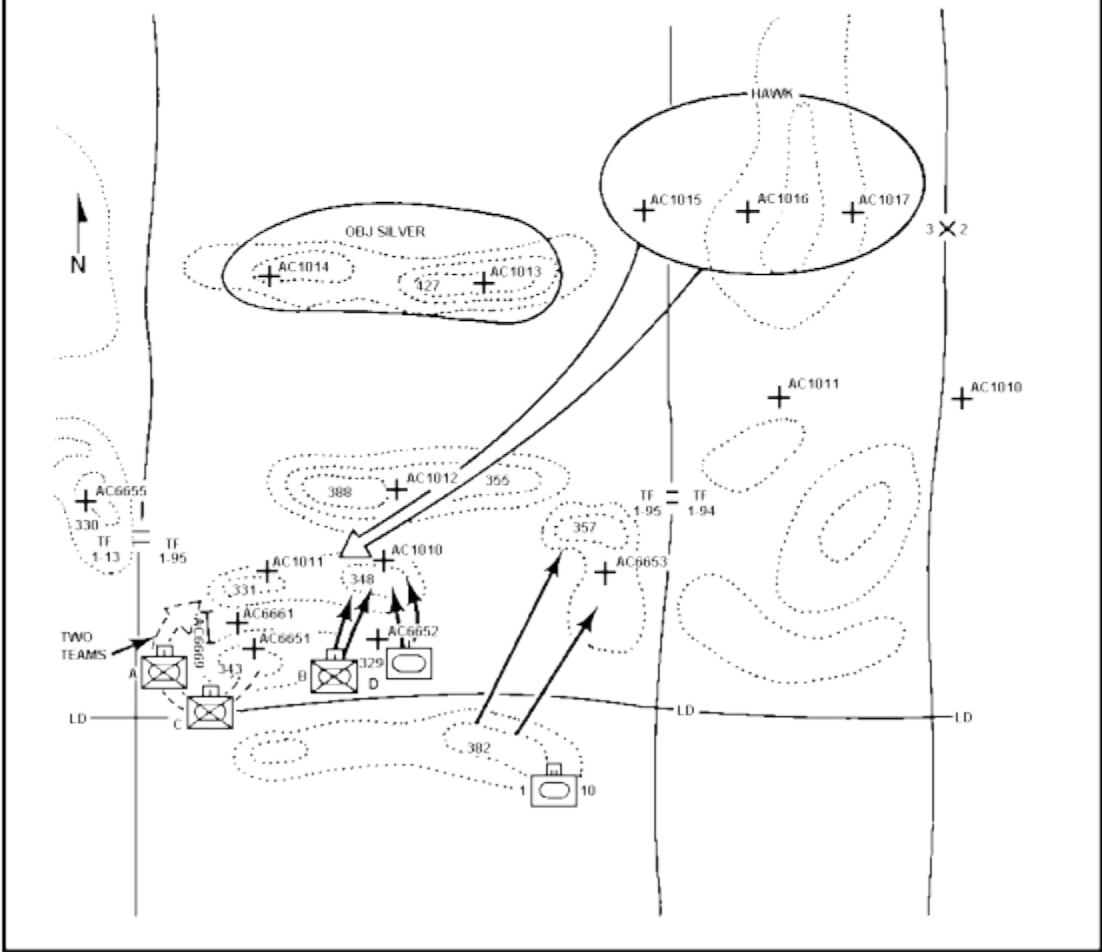
FIGURE 19.   FOURTH PHASE OF BATTALION/TASK FORCE
DELIBERATE ATTACK.

In *phase 4*, the elements on Hills 355 and 368 suppress Objective SILVER with direct fire as two teams move rapidly from Hill 348 to attack the west flank of Objective SILVER. Obscuring smoke and HE-VT suppression are planned on Target AC6658 to cover movement of the two teams. (This fire will have to be coordinated with the TF 1-13 FSO before execution and will be called for and adjusted by either Team A or Team C FIST when needed.) The TF's four air sorties will be used to strike enemy positions on SILVER at this time. Series FALCON is planned on Objective SILVER by adding six targets between AC1014 and AC1013. Again, these will be fired from left to right as the teams advance and destroy enemy forces on the ridge.

As the teams clear the objective, the FSO plans to shift the FA fires to Hills 410 and 430 (not shown) 2 kilometers north of SILVER to preclude enemy reinforcement attempts. Targets AC6659 and AC6660 are planned so that fires can be rapidly massed against any enemy counterattack to regain Hill 427. Fires are also planned to support the bypass of TF 1-15 on the left and TF 1-14 on the right.
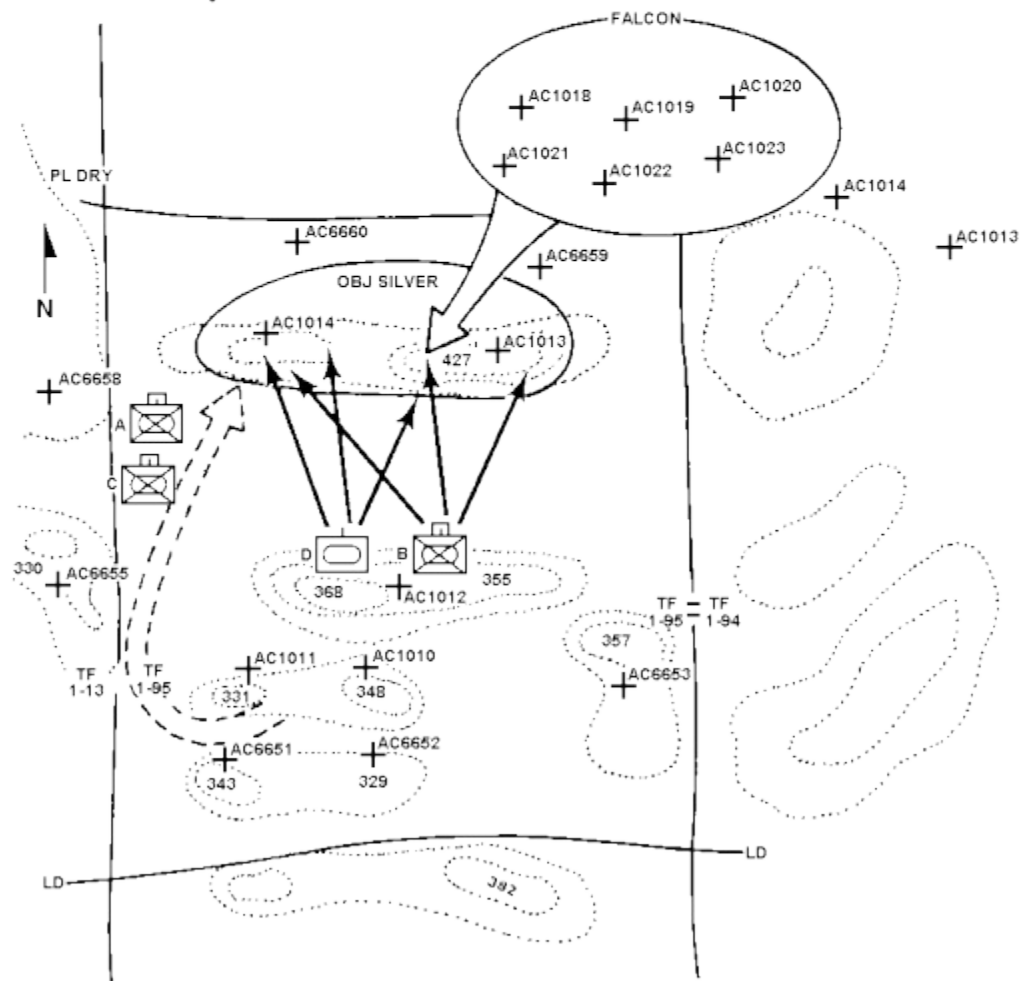
NOTE

Other types of planned fires may be substituted for a preparation. Aggressively applied series, groups, and programs of targets can be used to responsively support each echelon of maneuver throughout the attack. These fires are continuously planned to suppress forces on flanks of the penetration, fix enemy forces away from the penetration, and prevent reinforcement by follow-on forces. These fires help block enemy movement of reserves, destroy his command and control facilities, neutralize his artillery, and prevent the escape of retreating elements.

EXPLOITATION

Exploitation is an offensive operation that follows a successful attack to take advantage of weakened or collapsed enemy defenses. An exploitation is conducted to prevent reconstitution of enemy defenses, to prevent enemy withdrawal, to secure deep objectives, and to destroy enemy forces.

Forces in the exploitation usually advance rapidly on a wide front. Actions are characterized by speed, responsive fire support, and speedy commitment of reserves. The exploiting forces drive swiftly for deep objectives to seize command posts, sever escape routes, and hit reserves, artillery, and other combat support units.

An exploiting division should have as many air support systems as corps can afford. These aircraft can:

- Operate effectively when enemy defenses are crumbling.

- Quickly deliver massive amounts of ordnance.

- Operate across wide and deep sections.

- Seek out, follow, and destroy withdrawing enemy forces.

- Present no rearming or refueling burdens to the land force.

- Block avenues of approach for counterattacking enemy forces.

Follow-and-support forces may be used in exploitation. The follow-and-support force is not a reserve. It is a committed force and is provided appropriate fire support. Follow-and-support forces can:

- Widen or secure the shoulders of a penetration.

- Destroy bypassed enemy.

- Relieve support units that are halted to contain enemy elements.

- Block the movement of enemy reinforcements.

- Open and secure lines of communications.

- Guard prisoners, key areas, and installations.
- Control refugees.

FSCOORD Considerations

The FSCOORD considerations unique to the exploitation are listed in the following paragraphs.

Fire Support Tasks. FSCOORD fire support tasks unique to exploitation operations are to:
- Provide highly mobile, flexible fire support responsive to the needs of maneuver.
- Place suppression fires to fix bypassed enemy pockets of resistance until friendly maneuver elements are safely past and follow-up forces can deal with them.
- Provide fires to slow/block enemy retreat.

Command and Control. In exploitation, the FA force commander will use decentralized control because of the decreased requirement for massed fires. There is also the need for extremely responsive fire support. The FSCOORD should consider attachment of FA assets.

Fire Support Planning and Coordination. As the FSCOORD plans and coordinates fire support for an exploitation, he should:
- Conduct limited informal planning.
- Redistribute long-range/retransmission (retrans) communications equipment to facilitate long-range operations.
- Delete old targets as the exploitation continues and as new targeting information becomes available.
- Plan for increased POL/ammunition usage.
- Position artillery/mortars far forward. Displace them continually.
- Place fire support coordinating measures well forward.
- Plan on-order measures.
- Place some available CAS on ground alert.
- Plan for the use of scatterable mines to block retreating enemy and inhibit enemy reinforcements.
- Plan fires to impede enemy breaching of hasty minefields.

PURSUIT

A pursuit is an offensive operation against a retreating enemy force. It follows a successful attack or exploitation. Pursuit is ordered when the enemy cannot conduct an organized defense and attempts to disengage. Its objective is to maintain relentless pressure on the enemy and completely destroy him.

In many respects, fire support for the pursuit is similar to that for the exploitation. The main differences are explained by the single goal of the pursuit, which is to destroy the enemy. Forces conducting a pursuit continue direct pressure on a broad front against the enemy with one element. Another highly mobile encircling element cuts the enemy's retreat to intercept and destroy him. If the encircling force cannot outdistance the enemy, it attacks the enemy's main body on its flanks. While rapid advances on multiple routes characterize operations in the pursuit, the objective is to bring the elements together to destroy the enemy.

The fire support system must be flexible enough to allow independent support for both the direct pressure force and the encircling force during the pursuit. It must still allow coordinated employment to destroy the enemy after he is trapped.

FSCOORD Considerations

FSCOORD considerations unique to the pursuit are listed in the following paragraphs.

Fire Support Tasks. FSCOORD fire support tasks unique to the pursuit are to:

- Provide both the direct pressure and encircling forces with highly responsive fire support (refer to figure 20).
- Make air support highly responsive.
- Provide fires to slow the retreating enemy and preclude a reinforcing enemy from closing.
- Fix the bypassed enemy by fires until follow-on friendly forces can deal with them.

Command and Control. FSCOORD command and control considerations for the pursuit are:

- Decentralize organization of FA to increase responsiveness.
- Consider attachment of FA assets.

Fire Support Planning and Coordination. Because planning time is limited in the pursuit, the FSCOORD should conduct informal planning. Other planning and coordination aspects of the pursuit are to:

- Redistribute long-ranged/retrans communications equipment to facilitate long-ranged operations.

● Plan for increased POL/ammunition usage.

● Position artillery/mortars far forward and displace continually.

FIGURE 20.   DIRECT PRESSURE AND ENCIRCLING FORCES.
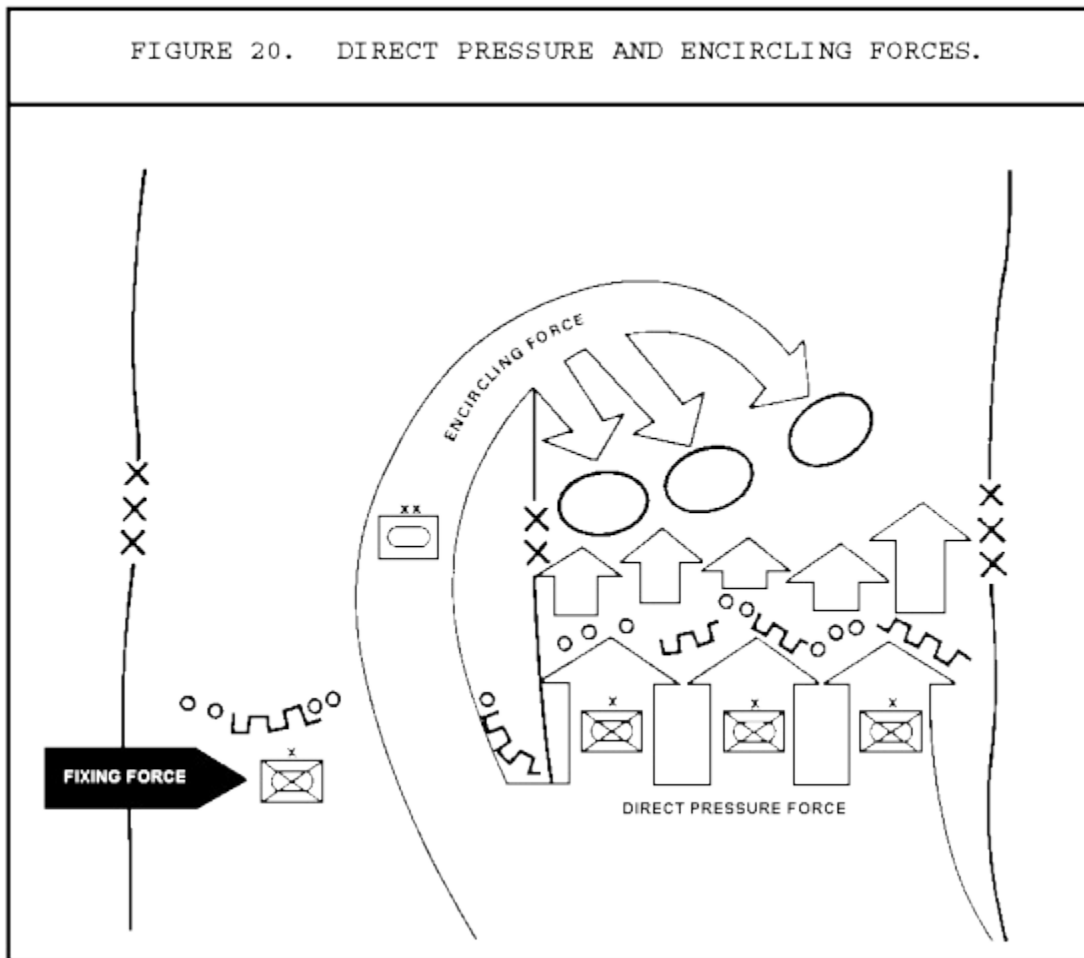
● Place fire support coordinating measures well forward.

● Plan on-order measures. A restrictive fire line (RFL) is required between direct pressure and encircling forces.

● Plan scatterable mines to block the retreating enemy and preclude a reinforcing enemy from closing.

You have now learned about fire support planning considerations for the offensive operations. The next learning event will discuss these considerations for defensive operations.

Learning Event 2:
IDENTIFY THE FIRE SUPPORT PLANNING CONSIDERATIONS AND PROCEDURES FOR
DEFENSIVE OPERATIONS

In the defense, a strong balance of fire support is necessary. Anticipated areas of the enemy's main
effort are allocated fire support.

FIRE SUPPORT IN DEFENSIVE OPERATIONS

General Defensive Considerations

Defensive operations are conducted for one or more of the following reasons. Each requires integrated
fire support to succeed.

- Defeat the enemy attack.

- Gain time.

- Concentrate forces elsewhere.

- Wear down the enemy to regain the offensive.

- Control terrain.

- Retain tactical, strategic, or political objectives.

The role of the fire support system in defensive operations is to support corps and division in fighting a
unified AirLand Battle within an organizational framework that consists of:

- A covering force operation to support the main effort.

- A main effort in the main battle area (MBA).

- A deep battle operation in the area of influence forward of the FLOT.

- Reserve operations to support the main effort.

- Rear area protection/combat operations.

The fire support system supports these operations by:

- Providing conventional, nuclear, and chemical fires at the desired time and place.

- Destroying, neutralizing, or suppressing enemy direct/indirect fire weapons.

- Suppressing enemy antitank weapon systems.

- Providing illumination and smoke.

- Isolating enemy echelons with fires.

- Suppressing enemy air defense, command and control facilities, and logistic sites.

- Delivering scatterable mines.

● Locating enemy targets with available target acquisition assets.

The overall defensive effort is based on the factors of METT-T. The commander allocates forces and resources within the elements of the organizational framework. A successful defensive action at any level requires the use of initiative, depth, agility, and synchronization.

<u>Initiative</u>. All uses of initiative by a defender are geared toward shifting from the defensive to the offensive.

<u>Depth</u>. The defender attacks the enemy force throughout the depth of his attack formations to delay and disorganize him.

<u>Agility</u>. This is displayed through flexible uses of fire, maneuver, and electronic warfare in an attempt to keep the attacker off-balance.

<u>Synchronization</u>. This is the blending of all resources into a well-coordinated defensive action.

FSCOORD Considerations

In coordinating fire support for the defense, as in the offense, the FSCOORD should focus on these considerations:

● Fire support tasks.

● Command and control.

● Fire support planning and coordination.

<u>Fire Support Tasks</u>. In general, the fire support tasks for the defense are to:

● Disorganize, delay, and weaken the enemy before the attack begins.

● Strip away enemy air defense and reconnaissance.

● Strike the enemy formations as the enemy attacks.

● Deny the enemy use of chosen approaches.

● Canalize enemy formations.

● Suppress enemy direct and indirect fire weapons (to include suppression of enemy air defenses [SEAD] and counterfire).

<u>Command and Control</u>. The vagueness of the initial situation in the defense dictates that the supported commander maintain more centralized control of his fire support. This is done by assigning field artillery firing units tactical missions that retain fire planning, priority of fires, and positioning authority at higher levels. This will ensure responsiveness by those units in massing and shifting of fires.

As a minimum, each committed maneuver brigade-size force should have the support of at least one field artillery battalion. Most of the allocated air support sorties are retained at division and corps levels for use at critical times and in critical areas.

<u>Fire Support Planning and Coordination</u>. General defensive considerations for fire support planning and coordination are to:

- Plan permissive fire support coordinating measures close enough to open up as much of the battlefield as possible. It must also be far enough away to avoid interference with the friendly operation.

- On the basis of the commander's attack guidance, engage critical targets defined during the targeting process.

- Position indirect fire systems to maximize range capabilities and avoid being overrun during enemy successes. This is called lateral repositioning.

- Stress maximum use of wire communications.

- Pre-position ammunition stocks and prepare subsequent FA and mortar firing positions for occupation.

- Coordinate survey requirements for subsequent FA and mortar firing positions.

- Plan the use of scatterable mines to canalize or slow the enemy attack.

- Plan/coordinate schedules of fire to block/halt the enemy attack and to destroy an enemy congested at minefields/obstacles.

- Use Copperhead to defeat armored vehicles, fortified positions, and tactical landmarks, such as bridges.

<u>Types of Defensive Operations</u>.

All defensive operations assume the characteristics of one or more of the following:

- Covering force.

- Main battle.

- Deep attack.

- Rear area combat operations.

- Retrograde operations.

COVERING FORCE AREA DEFENSE

The covering force area (CFA) extends from the forward line of own troops (FLOT) (or line designated by the force commander) back to the forward edge of the main battle area (FEBA) in the main battle area (MBA). Usually, this area is deep enough to develop the situation and determine the enemy's intent. The mission of the covering force is to:

- Gain and maintain contact with attacking enemy forces.

- Develop the situation.

- Delay or defeat the enemy's leading fighting forces.

When a strong covering force has been established, it may be tasked to fight a major battle to destroy leading enemy formations. It also causes the commitment of follow-on battalions or regiments, thereby disrupting and divulging the enemy's main attack.

A division covering force must be highly mobile. It may consist of a number of battalion-sized task forces formed of armored cavalry, tanks with mechanized infantry, attack helicopters, antitank weapons, air defense engineers, and substantially increased fire support assets. A covering force may be organized from corps or division assets or from brigade assets if terrain precludes control by a higher headquarters.

The three variables that influence the decision as to who will exercise control are:

- Depth of the area.

- Width of the sector.

- Availability of control headquarters.

When the covering force is established by a division, the division will control the covering force. This requires that control of the covering force battle be passed to forward committed brigades at a reasonable distance forward of the main battle area. In determining where to exchange this control, prime considerations include the nature of the terrain and the ability of the MBA brigades to coordinate fire in support of the covering force. Other considerations include the flow of the battle, enemy pressures, and communications capabilities to provide positive control over covering forces.

The entire covering forces should not be withdrawn automatically when the first enemy units reach the FEBA. Covering force elements remaining forward can continue surveillance, upset the attacker's coordination, and enhance counterattacks forward of the FEBA.

Fire support personnel at all levels plan fires to engage targets, beginning well forward of their initial delay positions and extending back into the MBA.

Artillery support is organized for combat and controlled to provide maximum support to the covering force area. At the same time, however, it must maintain a degree of flexibility to ensure a smooth transition to the MBA mission. Use of general support (GS) and general support reinforcing (GSR)

missions makes artillery more responsive to the force commander, allowing him to influence the action throughout the zone.

Fire planning and placement of the fire support coordinating measures should provide maximum coordinated and continuous support for the force. At the same time, it must provide a reasonable safeguard for friendly forces from friendly fires. For example, successive coordinated fire lines (CFLs) are planned and disseminated. They are then placed into effect on order as the CFA battle progresses. In the defense, CFLs should be placed as close to friendly forces as the situation permits.

All available target acquisition devices are keyed to acquire targets and pass the target information as early as possible to the controlling headquarters for processing and timely engagement. Usually, target acquisition and cannon assets are placed as far forward in the zone as possible to facilitate early reaction. Cannon units designated to provide primary support to the MBA forces are initially positioned in forward supplementary positions. This is done so they can be responsive to the CFA artillery units if necessary. Positioning and displacements of all artillery and target acquisition assets must be carefully controlled by the force FA headquarters to maintain maximum continuous artillery support forward at all times.

Through thorough planning, communications, and coordination, continuous support is maintained, allowing a smooth transition from phase to phase of the operation.

FSCOORD Considerations

FSCOORD considerations unique to support of the covering force are listed in the following paragraphs.

Fire Support Tasks. Tasks to support the covering force are to:

- Engage early to strip away enemy reconnaissance elements and disrupt his intelligence-gathering effort.

- Engage the enemy with deep fires beyond the CFA to create confusion and cause him to deploy early.

- Provide adequate and continuous close support committed units (normally FA battalion to maneuver battalion).

- Maintain close interface between FSEs to facilitate a smooth handoff of the battle when the covering force conducts a passage of lines through the FEBA into the MBA.

- Use COLTs to overwatch likely avenues of approach. These teams provide early warning, range finding, and target designation capabilities for economy-of-force purposes.

- Use all available FA to support the covering force fight.

<u>Command and Control</u>. Command and control functions in support of a covering force include these considerations:

- The MBA force FA should be used to add weight to the covering force. MBA force fires are responsive to the covering force FA needs until change of command and control.

- An FA battalion normally provides support to a maneuver battalion.

- Assign on-order missions to all FA units in the covering force to facilitate egress to the MBA.

- Provide for rapid transition of artillery responsibilities from the CFA force artillery headquarters when two distinct headquarters are involved.

- CFA artillery organization should be of representative calibers.

<u>Fire Support Planning and Coordination</u>. Planning and coordination for covering force operations should be made as formal and detailed as possible. The FSCOORD should:

- Plan fires to strip reconnaissance elements and to slow, stop, or canalize enemy attacks/movements.

- Plan and coordinate routes, positions, ammunition, control of fires, and communications lines to the MBA.

- Coordinate displacement of CFA FA units to ensure continuous fire support to the covering force maneuver units.

- Position FA units far forward to attack lead enemy reconnaissance elements and enemy formations as they are acquired.

- Plan, coordinate, and disseminate permissive fire support coordinating measures to facilitate rapid engagement of enemy forces.

- Prepare subsequent FA and mortar positions for occupation.

- Plan for the use of scatterable mines to canalize the enemy into preferred avenues of approach/engagement areas and to block/slow enemy follow-on forces.

- Use COLTs to facilitate engagement of enemy armor on likely avenues of approach or on the flanks during economy of force operations.

- Plan nuclear/chemical fires on enemy troop concentrations, reserves, and logistical centers on the basis of the political situation, attrition of forces, and environmental conditions on the battlefield.

- Plan CAS on concentrated enemy positions.

- Retain a portion of CAS for immediate requirements to help thwart the enemy's main thrust when it is discovered.

- Plan screening and/or obscuring smoke on/in front of friendly positions to reduce enemy observation and facilitate withdrawal to subsequent battle positions.

- Establish communications procedures and channels to facilitate fire mission requests and coordination during change of command and control and rearward passage of lines.

- Consider pre-positioning ammunition for use by artillery units returning from the covering force area.

An example of a fire support mission in the covering forcearea is shown in <u>figure 21</u>.

MAIN BATTLE AREA DEFENSE

The main battle area extends from the FEBA back to the rear limit of the brigade area of influence. The bulk of the defending force is normally deployed in the main battle area to defeat the enemy's main thrust. Usually, the decisive defensive battle is fought either at the FEBA or in the main penetration. Reserves are positioned and maneuvered to destroy penetrating formations and to regain the initiative.

FIGURE 21.   FIRE SUPPORT IN THE COVERING FORCE AREA.

A US heavy division has received a mission to defend in sector. The division commander has organized his zone into a covering force area and a main battle area. Deployed in the division CFA are the CAB headquarters, a cavalry squadron, and three battalion-size task forces organized from divisional resources. A field artillery brigade headquarters and four FA battalions have been attached to the division and will provide fire support in the CFA. The brigade headquarters is the force artillery headquarters in the CFA.
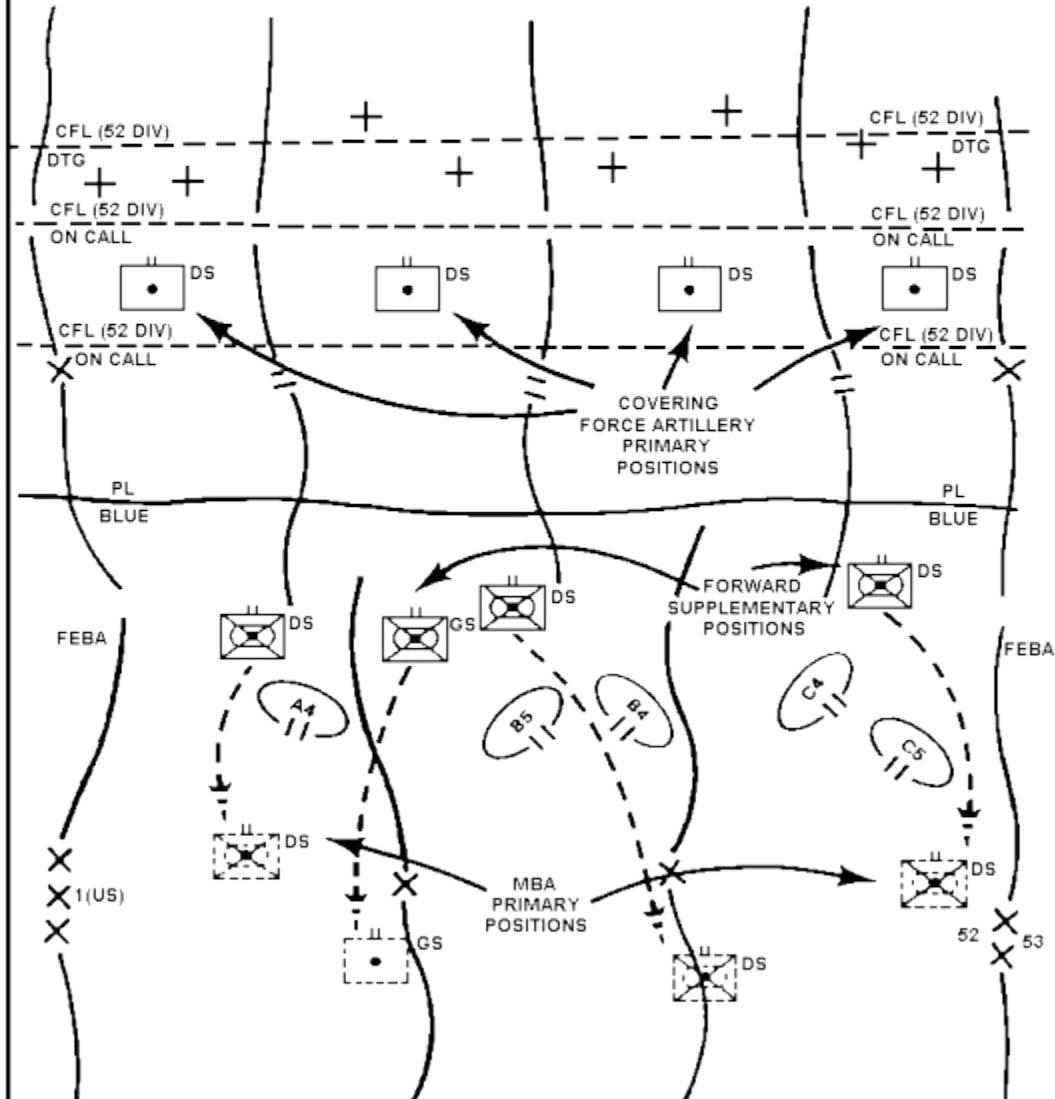
Fire support in the MBA is used to slow, stop, or destroy attacking forces and to enhance the use of mass fires to inflict the greatest damage. MBA fire support planning is refined during CFA action. Therefore, targeting information and intelligence on the developing battle must flow from CFA forces to MBA forces. The MBA sectors are assigned according to the capabilities of defending units, the terrain in each sector, and the mission of the parent force. Usually, these sectors coincide with major avenues of approach. The force making the main effort has the priority of available resources. Defensive plans are flexible to allow changes in priorities when the situation so dictates.

FSCOORD Considerations

FSCOORD considerations unique to the main battle area defense are listed in the following paragraphs.

Fire Support Tasks. The FSCOORD must consider fire support tasks unique to MBA defense. These tasks are to:

- Mass fires to canalize and slow enemy forces and increase engagement time.
- Plan fires on obstacles to slow breaching attempts.
- Assist maneuver elements in moving and disengaging.
- Plan fires to separate infantry from armor.

Command and Control. Command and control considerations unique to the defense of the MBA are to:

- Implement contingency plans when the main thrust is identified.
- Consider use of attached FA brigade headquarters as alternate division artillery tactical operations center (TOC) or assign a mission making it responsive to a force need in the MBA.

Fire Support Planning and Coordination. The FSCOORD should plan and coordinate fires to:

- Deny the enemy use of chosen avenues of approach.
- Suppress and obscure enemy avenues of approach and overwatch positions.
- Force enemy armored vehicles to button up and slow down.
- Establish final protective fires for mortars and FA.
- Support counterattacks or counterattacks by fire.

During additional planning and coordinating for fire support defense of the MBA, the FSCOORD should:

- Plan massed fires on enemy avenues of approach.
- Plan the use of scatterable mines to canalize the enemy into preferred avenues of approach/engagement areas and to block/slow enemy follow-on forces.
- Plan fires to cover and close gaps and lanes in barrier/obstacle systems.
- Employ COLTs in overwatch positions. These teams will provide early warning, range finding, and target designation for Copperhead.
- Coordinate immediate close air support to engage major armored formations.

● Plan smoke fires to facilitate disengagement and withdrawal to subsequent battle positions.

Figures 22 through 35 show an example of the steps followed in supplying fire support to a battalion/task force in the main battle area (MBA).

FIGURE 22. SUPPORT FOR THE MBA AREA OF CONCENTRATION.

The covering force has forced the enemy force to deploy and begin massing for its breakthrough attempt. Intelligence confirms that an enemy attack of two combined arms armies has split the division sector. The main effort, within the division, is in the center against the 2d Brigade. The enemy's second-echelon divisions are following 15 to 30 kilometers behind the first-echelon divisions. On the basis of this information, the commander begins to concentrate maneuver and fire support forces to meet the enemy breakthrough attempt.

Initially, the division commander attaches TF 1-2 Armor and TF 1-5 Armor to the 2d Brigade. The 2d Brigade forces then include TF 1-3, TF 1-4, TF 1-80, TF 1-2, and TF 1-5. Covering force maneuver elements nearing the forward edge of the main battle area are now under the control of the brigades in their respective sectors.

The following fire support assets are available to the 2d Brigade:

■ Mortars organic to the task forces of the brigade.

■ Priority on the 50 sorties allocated to the division daily.

■ The following field artillery:

□ 1-41 FA (155, SP): DS 2d Bde

□ 1-301 FA (155, SP): R 1-41 FA

□ 1-302 FA (155, SP): GSR 1-41 FA
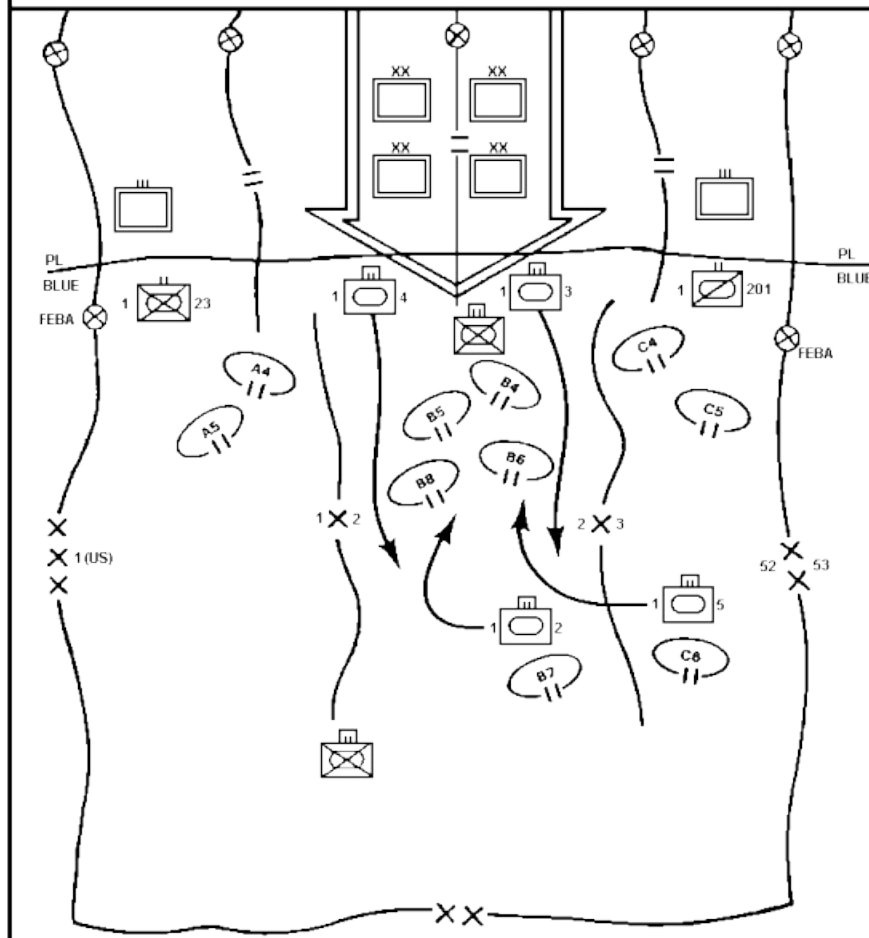
□ 1-303 FA (203, SP): GSR 1-41 FA

FIGURE 23. POSITIONING DIRECT SUPPORT AND REINFORCING FIELD ARTILLERY.

The 2d Brigade's DS battalion (1-41 FA) will have done all of the initial fire planning for the 2d Brigade fight from Phase Line BLUE throughout the brigade's sector. 1-41 FA will continue to plan and control FA fires in the 2d Brigade area of responsibility. The addition of the reinforcing FA battalion, however, doubles the firing units immediately available to deliver fires for 2d Brigade. The GSR elements will provide second-priority fires to 2d Brigade.

As the fight nears the FEBA and more targets appear, the normal relationship between the DS and reinforcing battalions may be altered. The demand for close support fires may be so great that *quick fire channels* must be used to allow engaged units to call for fire directly to batteries of the reinforcing battalion. The DS battalion, however, must monitor these requests so that all available field artillery can be massed on appropriate targets throughout the brigade sector. Available GSR fires can be requested through liaison representatives in the FDC of the DS battalion.
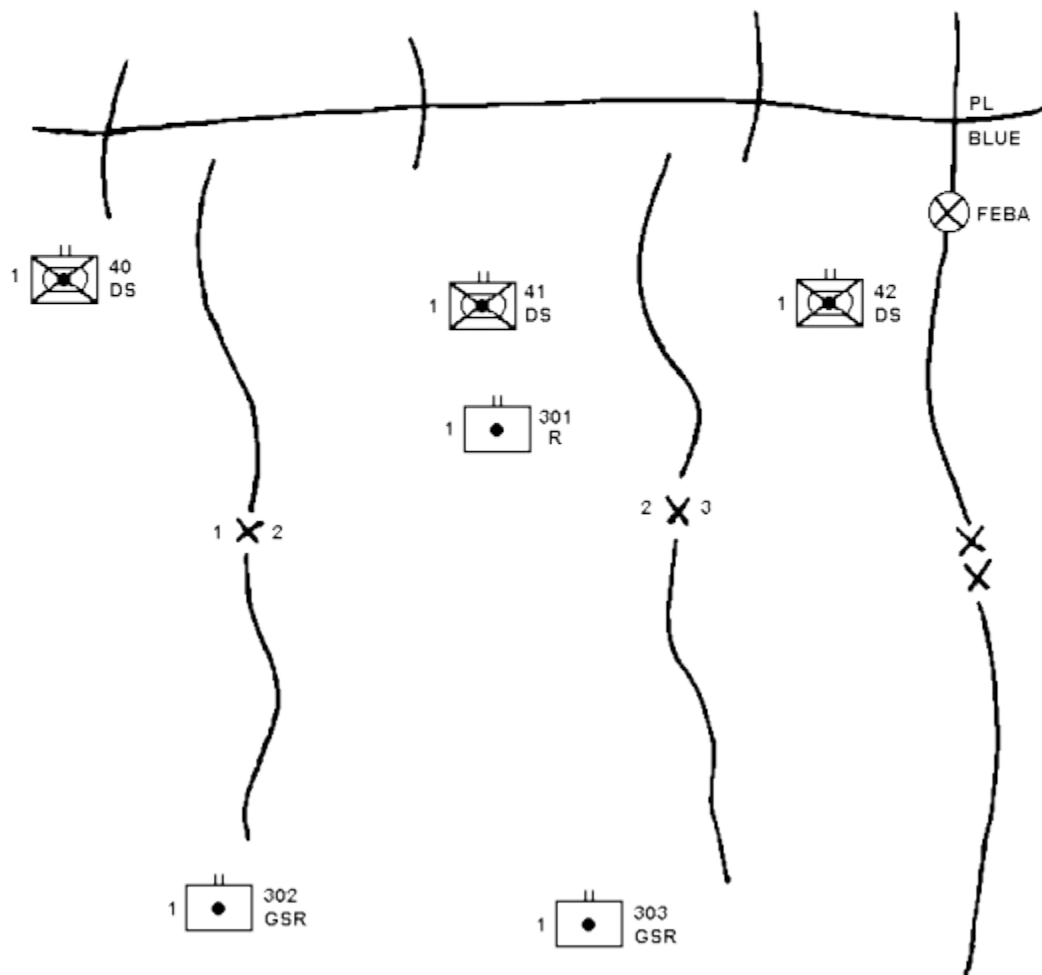
FIGURE 24. BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #1.

TF 1-80 Mech is in Battle Position (BP) 84, preparing to defend in the 2d Brigade sector. TF 1-80 receives the mission to *defend in sector*. The brigade commander defends as far forward as possible. His plan capitalizes on every fold in the terrain to get long-range fields of fire and to permit surprise flanking direct fire whenever possible. The TF 1-80 commander and FSO were especially alert to areas where they could apply massed fires to slow or stop the enemy. These massed fires will be essential to provide adequate target engagement time for direct fire weapons.

For this mission, the TF 1-80 commander planned with the following major assets available:

- ■ Three mechanized infantry companies (one company detached).
- ■ One tank company (attached from tank battalion).

The TF commander organized his teams as follows:

- ■ Teams A, B, and Tank each consist of:
- □ Two mechanized infantry platoons.
- □ One tank platoon.
- □ One antitank section.
- ■ Company C remains mechanized infantry pure.

Fire support assets are:

- ■ Mortars of one battalion mortar platoon.
- ■ FA as follows:

- □ One FA battalion (DS to 2d Bde).
- □ One FA battalion (R DS bn).
- □ Additional fires from GSR battalions.
- ■ CAS from brigade sorties.

As the commander analyzes the mission and visualizes the battle, the FSO continually —

- ■ Assesses the capabilities of the unit's indirect fire support means.
- ■ Advises the commander on the indirect fire supportability of a particular course of action. Some of the items addressed are:

- □ Distribution of close support fires, counterfires, and interdiction fires needed to support the mission.
- □ Use of munitions (smoke, DPICM, ADAM, RAAMS, etc.).
- □ Ammunition constraints caused by logistical realities.
- □ Positioning/movement requirements for indirect fire assets.
- □ CAS availability/capability.
- □ Use of FA to slow enemy breaching efforts through obstacles.
- ■ Assists the commander in arriving at the course of action that best uses the capabilities of both maneuver and fire support assets. He does this by prioritizing the supportability of the courses of action on the basis of the strengths and weaknesses of fire support in each course.
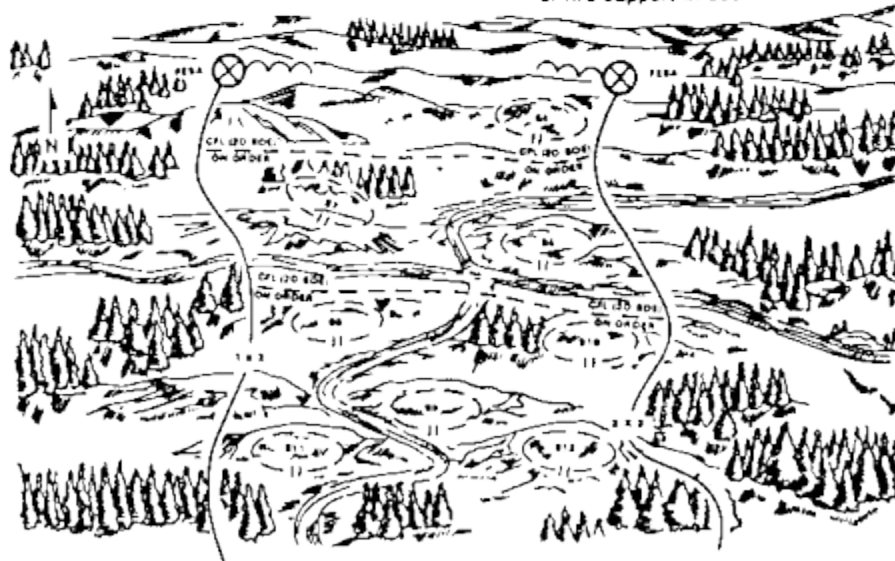
FIGURE 25.   BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #2.

As the battle nears the FEBA, the covering force task forces are about to pass through the FEBA forces, which are deployed as shown.

In the main battle area, complete integration and coordination of direct and indirect fires are critical.

TF 1-80 has placed scouts reinforced with tube-launched, optically tracked, wire-guided missiles (TOW) forward of these FEBA positions to assist the passage of covering force elements. Scouts have contacted main elements of the covering force and are preparing to call for fire that was coordinated by the covering force elements.

As the covering force elements disengage by using fire and movement, forward covering force teams integrate massed fires on approaching enemy columns. The teams increase the volume of direct and indirect fires to cover the withdrawal. Observation/lasing teams employed with the scouts are aware of these targets and other planned targets in the area and continue the application of indirect fire as the last covering force elements pass the scouts' position.
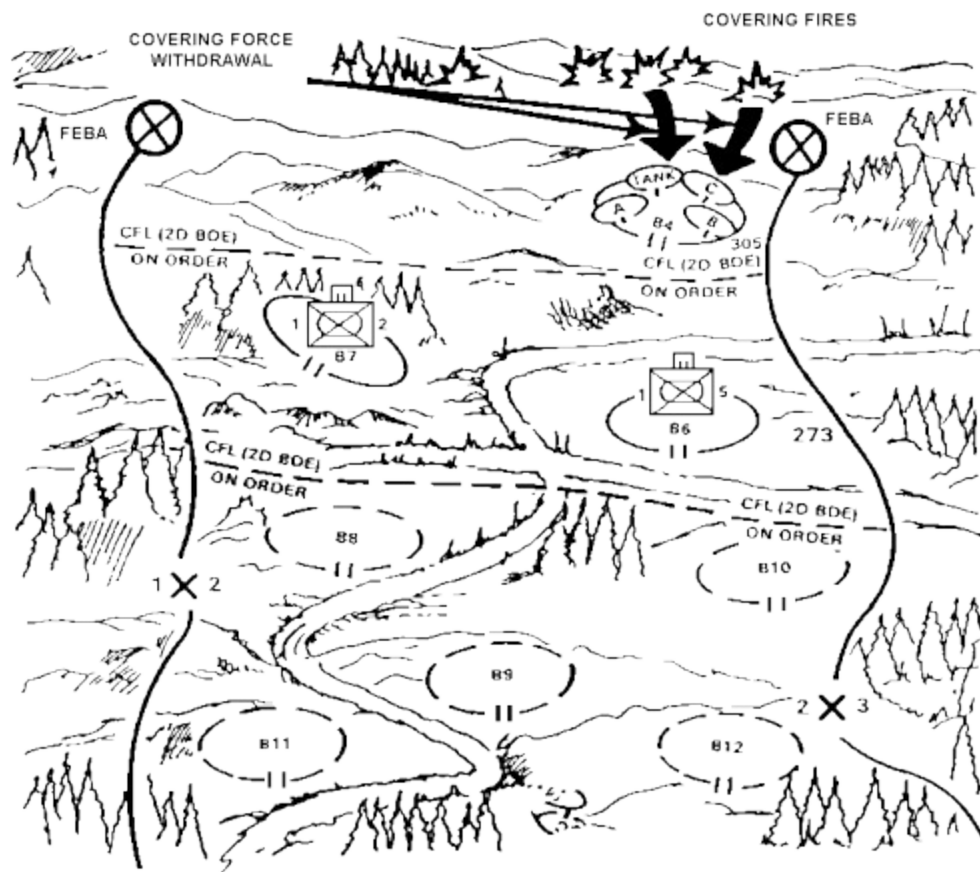
FIGURE 26.   BATTALION/TASK FORCE IN THE MAIN
BATTLE AREA #3.

As the enemy approaches, the scouts withdraw through the FEBA forces under the overwatching fires of TF 1-80. The TF 1-80 FSO ensures that all targets are covered, and he controls some fires from the TF FSE, if necessary, to protect the scouts' withdrawal. Scouts and O/L teams provide specific information on the location of advancing enemy elements. The FSO carefully monitors this situation to determine what modifications, if any, are required in fire support priorities or timing for the initial engagement in the main battle area.

When the enemy appears on and around the small ridge line to the front, the teams call for long-range indirect fires to slow him, to further button up armored vehicles, and to interrupt the momentum of his attack. These fires assume critical importance because the teams need maximum time to attack as many targets as possible within their assigned engagement areas. Fire support covers obstacles to slow the enemy's breaching attempts and prevent effective enemy overwatch.

The teams initiate direct fires against slowed enemy tanks and BMPs within the assigned engagement areas against a backdrop of massed fire support that destroys or suppresses trailing enemy elements. Team B, on the right, calls in long-range indirect fires against enemy elements that are moving southeast of the TF battle position. FISTs laser designate for Copperhead to provide a first-round kill capability.

As the battle progresses, the task force receives enemy artillery and mortar fires of increasing intensity. These fires seriously impair the task force's direct fire capabilities. The FSO requests counterfire through the DS FA battalion to the div arty TOC, which responds immediately with a counterfire mission oriented on the direction provided by the task force FSO and the FIST chief.
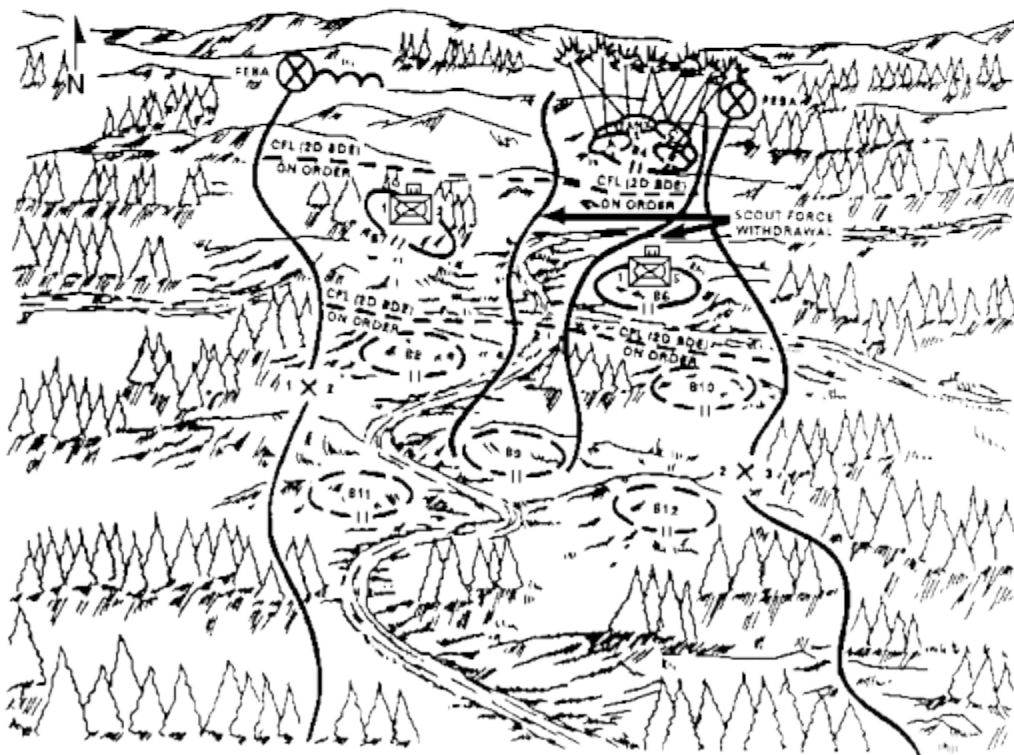
FIGURE 27.   BATTALION/TASK FORCE IN THE MAIN
              BATTLE AREA #4.

During the battle, Team B has been engaging enemy elements approaching to the right of the task force.

The task force has inflicted heavy damage on the enemy but is no longer able to remain in position. The task force commander, therefore, prepares to disengage and, with permission from the brigade commander, to move to his next position— Battle Position B9. To do this, the TF commander will hold Team Tank in the center to maintain pressure on the enemy and provide overwatch. He also detaches the tank platoon from Team B (on the right) and places it with Team Tank. He directs the FSO to be prepared to fire a smoke screen southeast of the battle position to cover movement

of the teams. The TF FSO calls for a mixture of smoke and HE fires to assist Team A in repositioning. He prepares to do the same for Team B and Company C as they disengage and move to the next battle position.

When TF 1-80 can no longer hold its positions, it passes around and is overwatched by TF 1-5 in Battle Position B6 and moves to prepared Battle Position B9. Detailed coordination between the FSOs of TF 1-80 and TF 1-5 provides for continuous control and coordination of fires as the passage takes place. When TF 1-80 has passed beyond Battle Position B6, the 2d Brigade FSO recommends and the brigade commander approves execution of an on-order CFL north of B6 and B7.
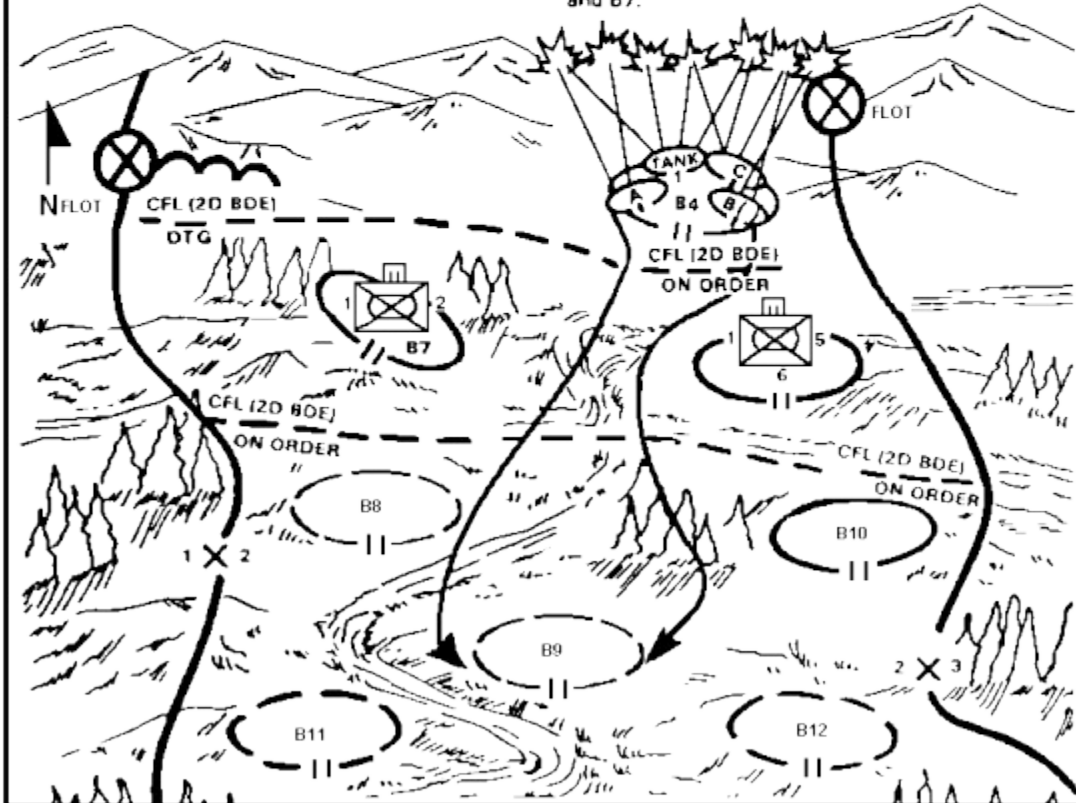
FIGURE 28. BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #5.

TF 1–4 from 1st Bde and TF 1–3 from 3d Bde take up prepared positions B8 and B10, respectively. TF 1–2 and TF 1–5 in positions B7 and B6 have come under intensive enemy artillery and mortar fires. With permission of the 2d Brigade commander, TF 1–2 and TF 1–5 move to prepared positions B11 and B12, respectively. TF 1–2 is overwatched by TF 1–4, TF 1–5 is overwatched by TF 1–3. The second CFL just north of B8 and B10 is then put into effect.
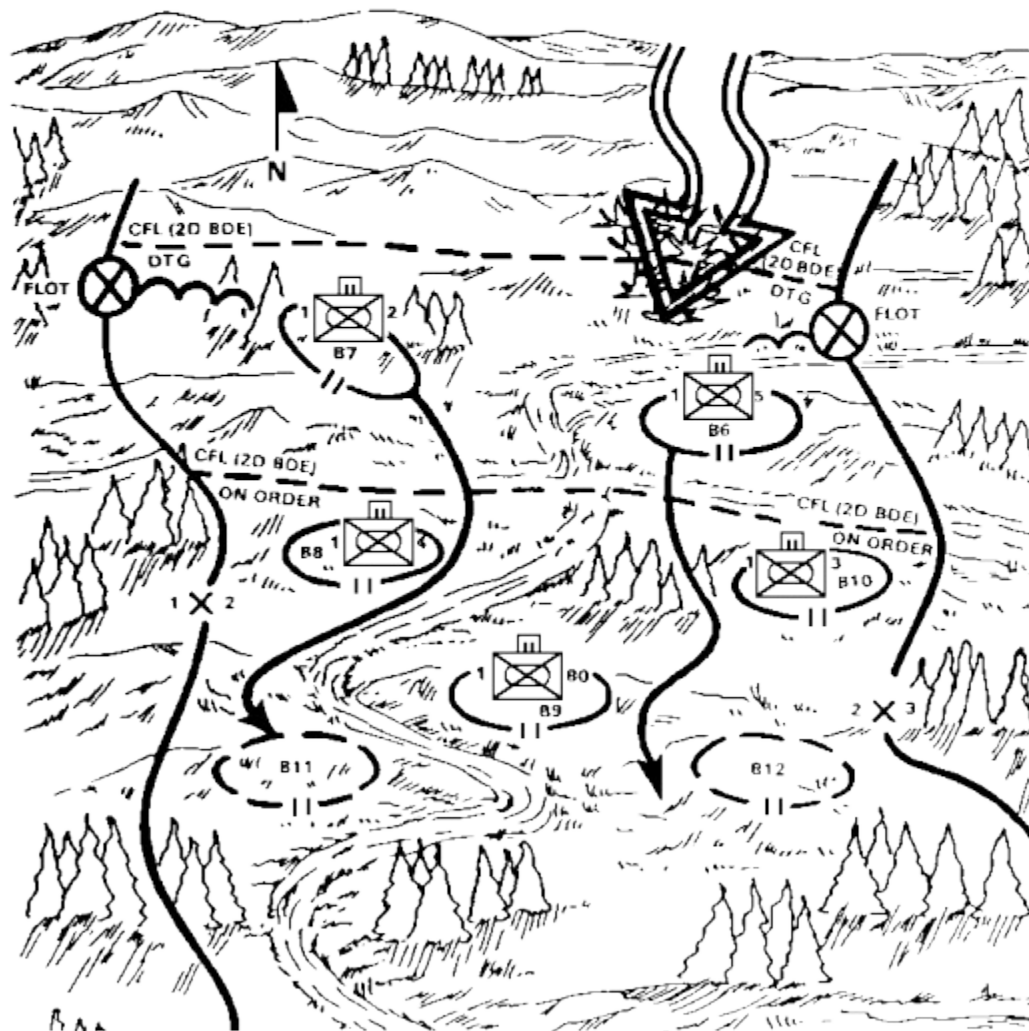
FIGURE 29.   BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #6.

Having been confronted with intense direct and indirect fires throughout the brigade sector, the enemy incurred high losses and his attack was slowed. He is presently being engaged by TF 1-4 Armor from Battle Position B8 and TF 1-80 Mech from Battle Position B9.

Seeing an opportunity to defeat remnants of the two enemy regiments in detail, the 2d Brigade commander now directs TF 1-3 Armor, in Battle Position B10, to conduct a tank-heavy team counterattack from the east.
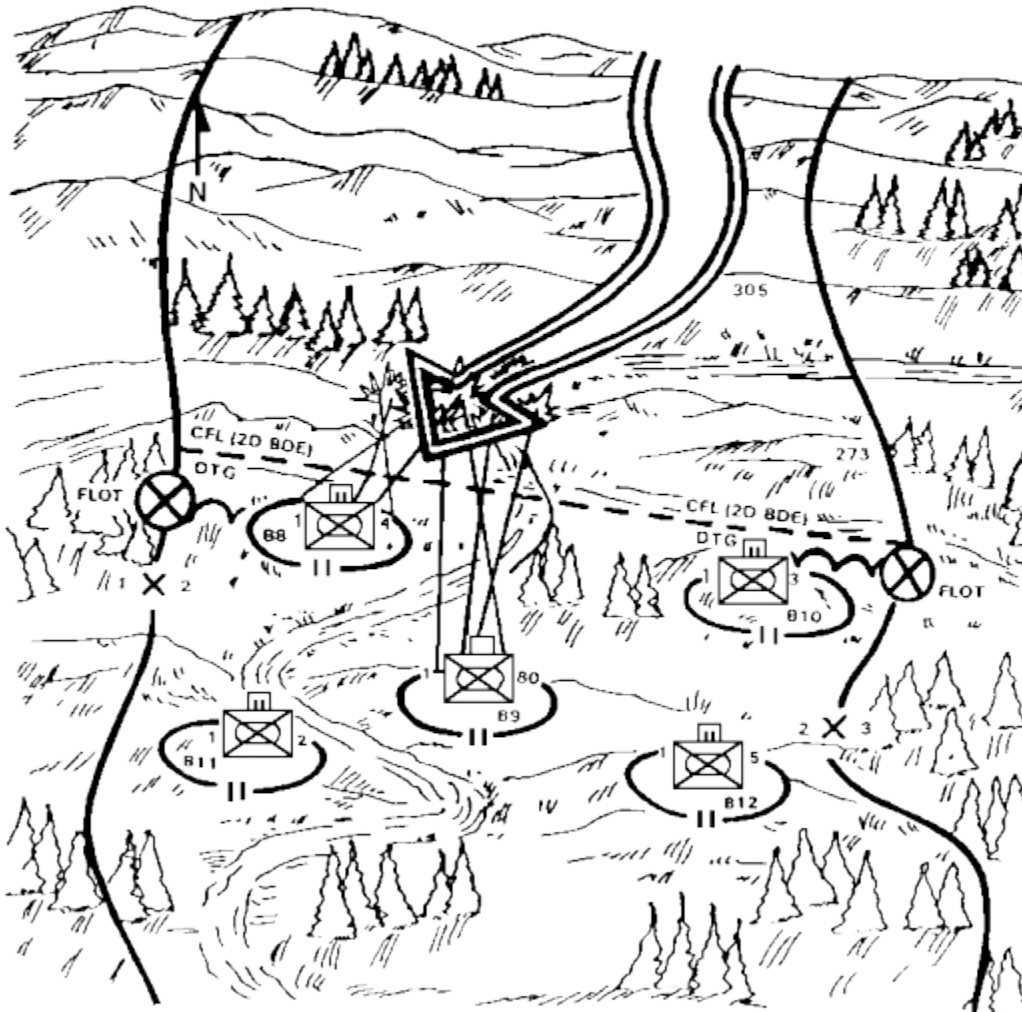
FIGURE 30. BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #7.

The TF 1-3 commander quickly formulates his plan and issues his fragmentary order. He decides to move one team, composed of the two tank platoons and one mechanized platoon, along route RED to attack into the enemy's flank from Battle Position B10A. He alerts the scout platoon to move a scout section north of Battle Position B10 to provide security and early warning. The commander then directs the TF FSO to employ an O/L team with the scout section, to plan targets to support the team's move, and to mass fires on the enemy. The TF FSO plans Targets AB3162, AB3163, and AB3164 to screen route RED. Targets AB3163 and AB3164 can also be used to mass fires on enemy elements that attempt to move along the road north of Battle Position B10A. Finally, Targets AB3165 and AB3166 will be used to mass indirect fires on the enemy. The TF FSO also requested that TF 1-3 Armor receive priority of fires from brigade.
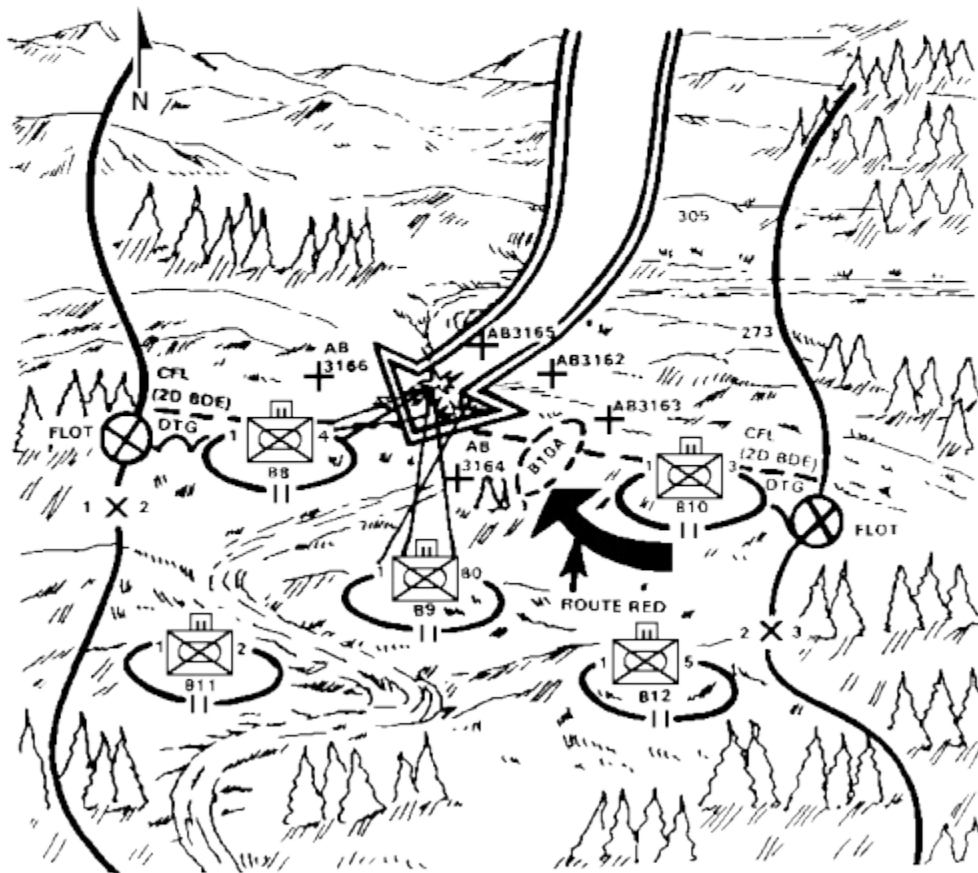
FIGURE 31.   BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #8.

The plan of the attacking team commander was to move to Battle Position B10A as rapidly as possible by using the available cover and concealment of the ground. To obtain maximum surprise, he directed his FIST chief not to screen the route but to be prepared to do so. The FIST chief coordinated with the mortar platoon leader so that the 107-mm mortars would be abreast of the team's movement and be prepared to fire when directed. On reaching Battle Position B10A, the team commander planned to deploy his mech platoon facing north to block the road while the tank platoons occupied positions facing west.
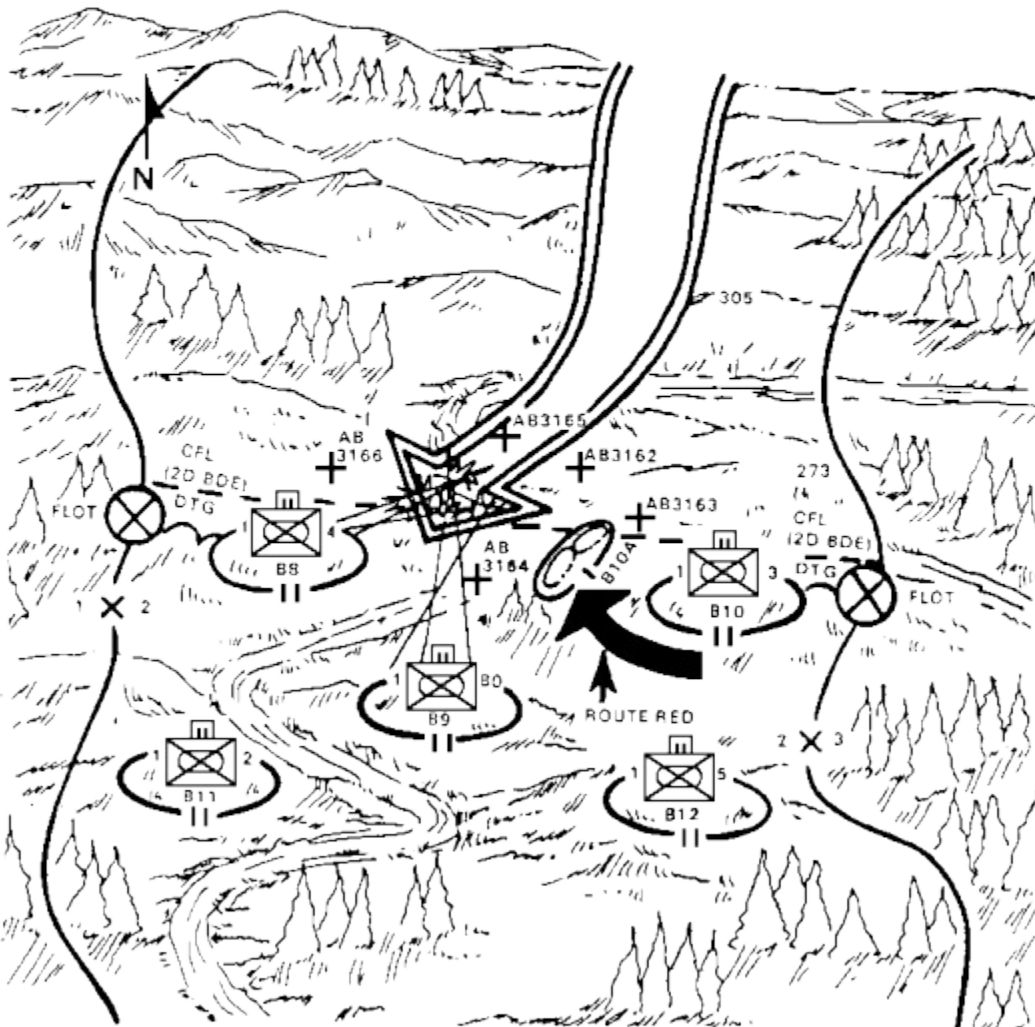
FIGURE 32. BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #9.

Using bounding overwatch techniques, the attacking team moved from Battle Position B10 along route RED and quickly occupied Battle Position B10A. On arrival in the battle position, the FIST chief called for a time-on-target (TOT) mission on Target AB3165. For this mission, he was able to obtain the fires of the two battalions GSR to the brigade's DS FA battalion and those of the DS battalion and its reinforcing battalions.

Most of the enemy forces not neutralized by the TOT became confused making them lucrative targets for the tanks and Copperhead. Firing rapidly and accurately, the tank platoons were able to destroy many of the enemy's armored vehicles. Those few enemy vehicles that were able to do so sought covered and concealed positions. These were engaged with DPICM and Copperhead that was directed by the G/VLLD-equipped FIST.
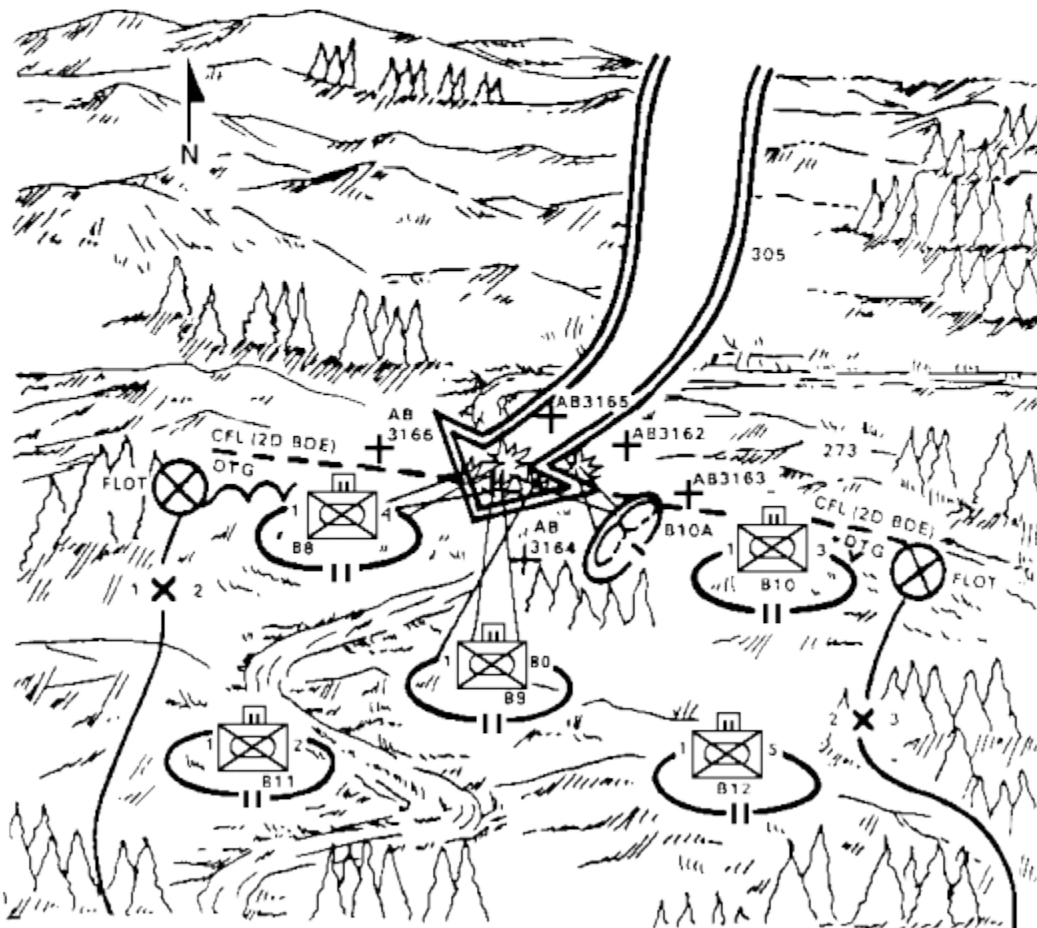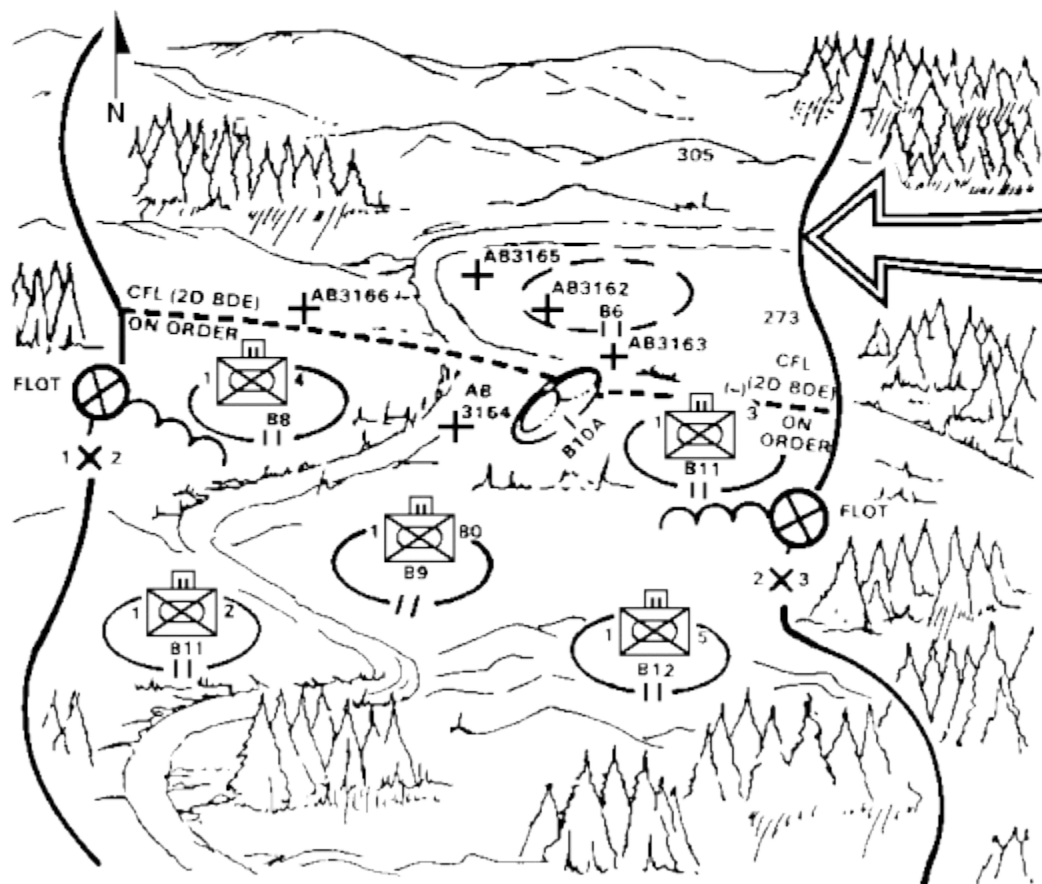
FIGURE 33. BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #10.

Shortly after the successful counterattack, the TF 1-3 Armor commander receives information that the division G2 has discovered elements of a second-echelon tank regiment northeast of the 2d Brigade sector. The enemy unit is moving toward the southwest at about 30 km per hour. Brigade has requested an immediate air strike on the target and has been notified that two flights of A-10s (four aircraft) loaded with 30-mm armor-piercing incendiary (API)/high-explosive incendiary (HEI) and Maverick missiles have been diverted from another mission. They will arrive on target in about 10 minutes.

Because of the enemy's air defense capability, the airborne FAC will remain 20 km to the south. The ground FAC with TF 1-3 has been directed to control the strike. The TF 1-3 ALO and FSO agree that the area just east of Battle Position B6 will be the best place for the strike.

FIGURE 34.   BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #11.

The ground FAC contacts the airborne FAC and is told to contact the flight leaders to ensure that they understand the attack information. Attack information includes target location, marking technique, maximum ordinate, gun–target line for suppressive fires, initial point (IP), and pullup point. The brigade commander establishes an informal ACA by directing indirect fire sources to keep fires west of a line between Hills 305 and 273 while CAS stays to the east of that line.

On the ground FAC's signal, the FSO has Target AB3058 marked with two WP rounds and continues the SEAD fires throughout the air strike.

The four A–10s arrive, acknowledge the marking rounds, and begin attacking the vehicles at the front and back of the column. The A–10s make multiple passes using their 30–mm guns and Maverick missiles to systematically destroy tanks.

The flight of four A–10s destroys 26 vehicles in less than 10 miniues. Six T–62s manage to break out around the minefield and evade the air strike. They are destroyed by direct fire from Teams C and Tank. The remaining tanks (three T–62s) break off the attack and take cover.

FISTs destroy the remaining tanks with Copperhead fires.

# FIGURE 35.   BATTALION/TASK FORCE IN THE MAIN BATTLE AREA #12.

The ground FAC contacts the airborne FAC and is told to contact the flight leaders to ensure that they understand the attack information. Attack information includes target location, marking technique, maximum ordinate, gun–target line for suppressive fires, initial point (IP), and pullup point. The brigade commander establishes an informal ACA by directing indirect fire sources to keep fires west of a line between Hills 305 and 273 while CAS stays to the east of that line.

On the ground FAC's signal, the FSO has Target AB3058 marked with two WP rounds and continues the SEAD fires throughout the air strike.

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FISTs destroy the remaining tanks with Copperhead fires.
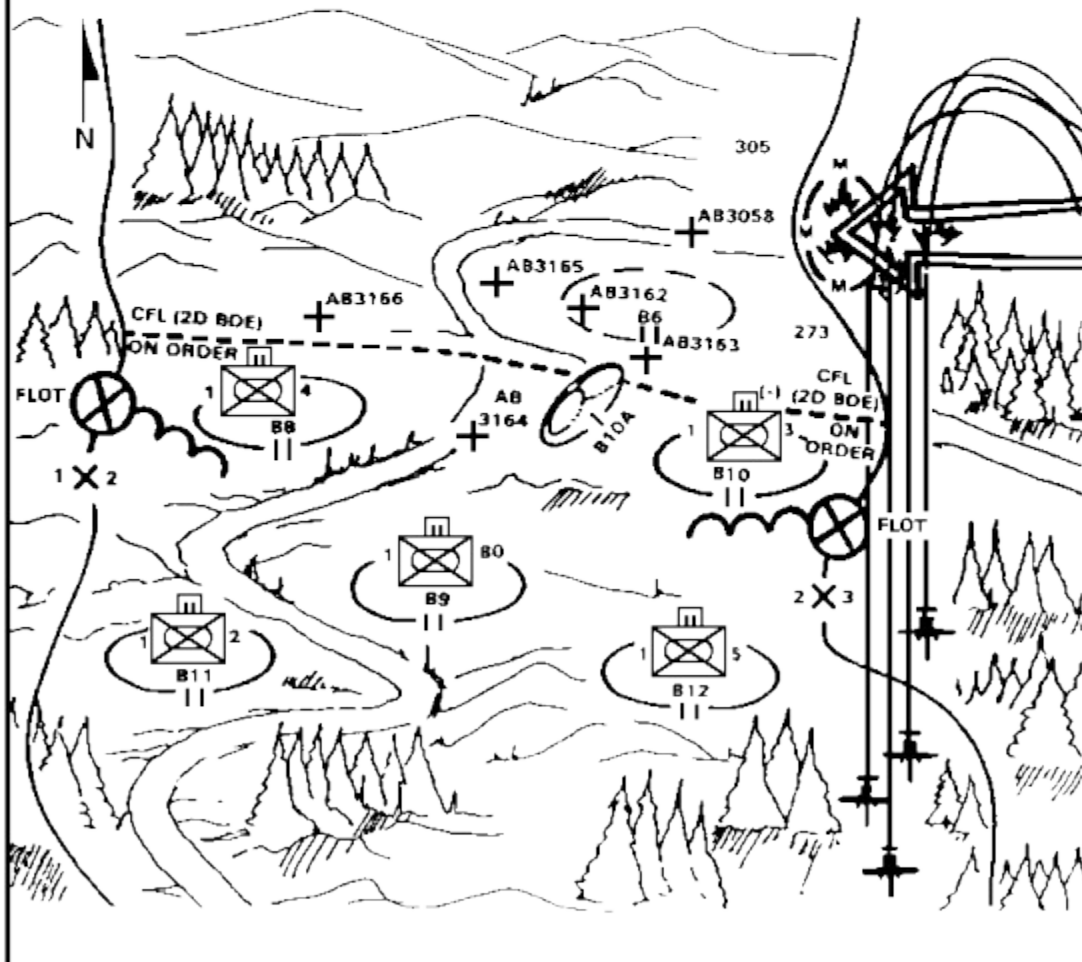
THE DEEP ATTACK

The deep attack is a continuous action designed to affect closure time of follow-on enemy elements. It creates windows of opportunity for decisive actions against leading enemy echelons. The primary tools for the deep attack include interdiction (by air, artillery, and special operating forces), offensive electronic warfare, and deception.

Intelligence preparation of the battlefield is used in conjunction with target value analysis (TVA) to enable commanders to attack targets, such as fixed bridges and mobile crossing sights. These cause enemy follow-on elements to "bunch up" and present themselves as lucrative targets. Elimination of enemy combat service support facilities and selected command posts also delays the enemy.

It is important that special care be taken to obtain the effects that will contribute directly to the success of the overall defense. To successfully conduct a deep attack, the FSCOORD, G2, and G3 must cooperate fully to retain a proper emphasis on the deep battle.

Normally, a maneuver deep attack will be initiated from a defensive posture and will be used to upset the enemy's timing and momentum. It will provide an opportunity for friendly forces to seize the initiative and gain the offense.

In the offense, a deep attack is conducted primarily by fire to isolate, immobilize, and weaken the enemy in depth in order to sustain the momentum of the attack. In such an attack, fires are planned to block the movement of enemy reserves.

In the defense, the deep attack may be conducted by fires and/or maneuver forces. In either case, fires are planned to degrade and disrupt the enemy's:

- Attacking echelons.
- Fire support.
- Command, control, and communications.
- Combat support and combat service support.

Lance missiles and battlefield air interdiction (BAI) are the primary tools used to provide long-range deep attack fires. When maneuver elements are used in the deep attack, artillery may be required to accompany the force. When field artillery accompanies the maneuver force's attack, FA considerations include:

- Mutual support must be planned for FA units equipped with automated fire support equipment.
- Extended communications lines will be required between the MBA force artillery and accompanying artillery units.
- Ammunition expenditure will be large.
- Maneuver force assistance may be needed to ensure security and survivability of FA units.
- Target acquisition and intelligence gathering assets will be taxed because of distance, frequency, and speed of moves.

- Logistical support, to include recovery, repair, and resupply, will constrain the force.

- Mobility of FA units must match that of the maneuver force.

- Command and control problems are inherent in any force operating at extended ranges from its parent organization.

- Simultaneous interdiction fires using long-range weapon systems must be planned to add weight to the attack.

Initially, the deep attack force will have to rely on the main battle area force for most of its fire support. BAI and suppression of enemy air defense missions must be accomplished to prepare the route of advance and to ensure either local air superiority or parity. Attack helicopters may be required to provide convoy protection. Offensive electronic warfare will be necessary to prevent the enemy from effectively redeploying to meet the deep attack force. Implementation of tactical deception measures to cover development of the deep attack force will help ensure surprise of the operation.

When the deep attack force has outdistanced the MBA artillery, organic mortars, accompanying artillery, and CAS will provide the preponderance of fire support for the force.

REAR AREA COMBAT

The purpose of rear area combat operations (RACO) is to prevent, neutralize, or destroy enemy threats to units, activities, and installations in the rear area. The rear area is defined as the area to the rear of the MBA in which supply, maintenance support, communications centers, and administrative echelons are located. A division's rear area runs from bridge rear boundaries to the division rear boundary. A corps rear area is located between the division rear boundary and the corps rear boundary.

Attacks on rear area installations are categorized as follows:

- Level 1. Attacks by agents, saboteurs, and terrorists.

- Level 2. Diversionary operations and sabotage by small tactical units.

- Level 3. Attacks by airborne, air assault, or amphibious forces and penetrating ground units.

Rarely will there be enough fire support to meet the needs of the MBA force and the RACO actions simultaneously. Division and corps commanders must apportion their fire support to meet the most critical needs.

The principal means of fire support normally available to support rear area operations are mortars, field artillery, and aircraft. In those areas near a coast line, naval gunfire support may be available.

For some rear area actions, field artillery with 6400-mil firing capability positioned within the MBA may be able to support RACO actions from their current positions. Other actions may require supplementary positions from which artillery can provide support. Routes to these positions are reconnoitered. Firing positions are prepared as time and the situation permits. Communications arrangements for fire support are planned. Maneuver elements assigned to rear area operations will

have their FISTs and fire support sections in place. This gives them FSCOORDs at levels through brigade size forces.

FSCOORD Considerations

The FSCOORD considerations unique to rear area combat operations are listed in the following paragraphs.

<u>Fire Support Tasks</u>. Fire support tasks unique to rear area combat operations are to:

- Establish liaison with the supported rear area force headquarters or the rear area operations center (RAOC).

- Select and prepare supplementary positions for indirect fire weapons, if needed.

- Arrange survey control for rear area positions for indirect fire weapons.

- Determine future FA ammunition considerations for rear area combat operations (RACO) action.

<u>Command and Control</u>. Fire support agencies committed to support rear area forces are designated by on-order missions. A liaison team must be established with force RAOC to facilitate planning and coordination of fire support.

<u>Fire Support Planning and Coordination</u>. In planning and coordinating fire support for rear area combat operations, the FSCOORD should:

- Integrate fire support into rear area battle plans.

- Plan fires and targets in the rear area.

- Select routes by which field artillery can move to supplementary positions.

You have just learned about the fire support planning considerations and procedures for defensive operations. The use of depth, agility, and synchronization play a large part on the overall defensive effort. Your next learning event will cover fire support planning considerations and procedures for retrograde, military operations on urbanized terrain (MOUT), and other operations.

Learning Event 3:
IDENTIFY THE FIRE SUPPORT PLANNING CONSIDERATIONS AND PROCEDURES FOR RETROGRADE OPERATIONS, MILITARY OPERATIONS ON URBANIZED TERRAIN (MOUT), AND OTHER OPERATIONS

Retrograde is the movement of a command to the rear or away from the enemy. It may be forced by the enemy or be voluntary.

TYPES OF RETROGRADE

Retrograde may be necessary when:

- Friendly forces are insufficient to attack or defend making it necessary to exchange space for time.

- The command is to be employed elsewhere or in a better position.

- Continuation of an operation no longer promises success.
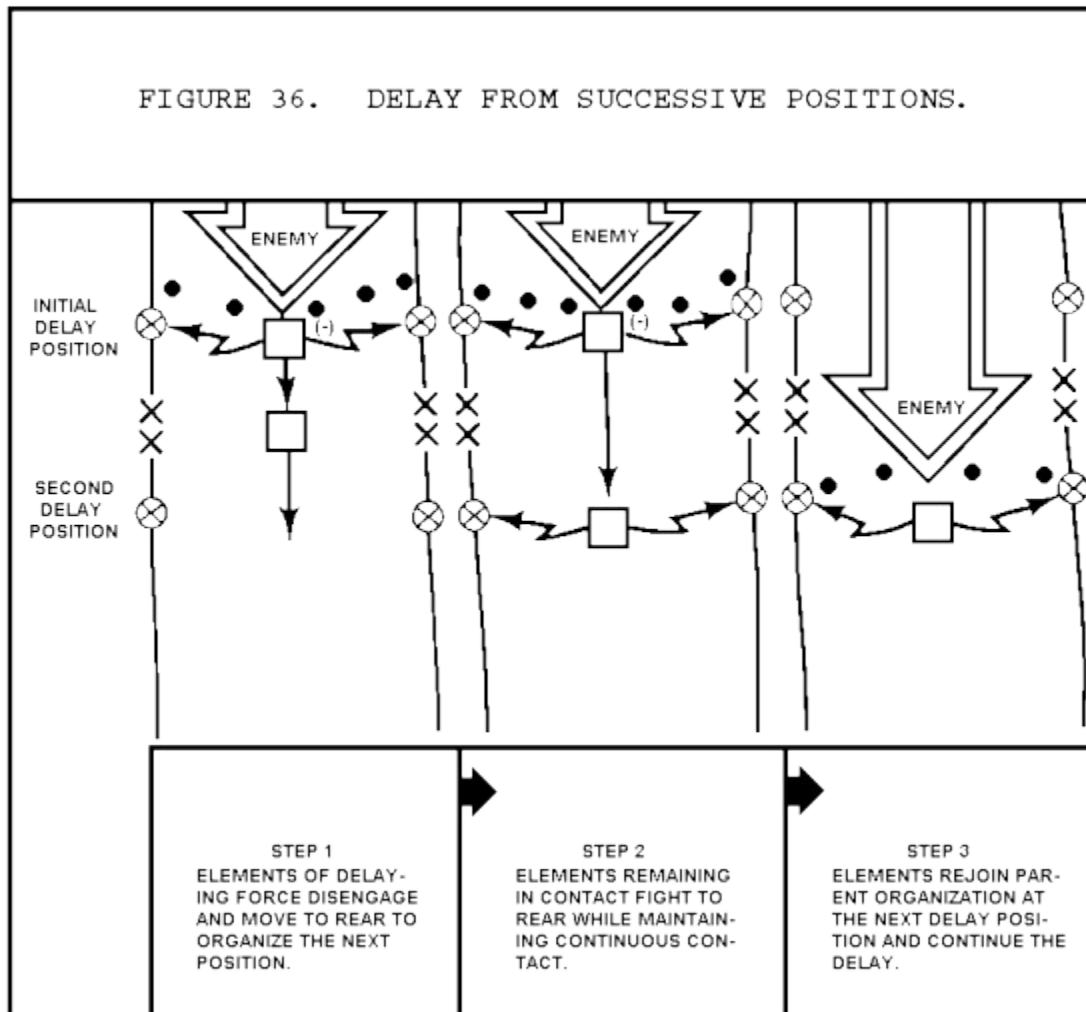
- The purpose of an ongoing operation has been achieved.

Retrograde operations are often conducted across wide frontages under dynamic and frequently vague conditions. Such operations place severe strain on communication systems. Control and coordination are difficult. Since a force in the retrograde is usually greatly outnumbered, skillful application of fire support is essential. Field artillery in support of retrograde operations must be as mobile as the supported force. The three types of retrograde actions are the delay, withdrawal, and retirement. The type of action employed will depend on the purpose of the rearward movement.

Delaying Operations

Delaying operations occur when forces are insufficient to attack or defend. They also occur when the defensive plan calls for drawing the attacker into an unfavorable situation. In delaying operations, units trade space for time in order to:

- Reestablish the defense.

- Cover a defending or withdrawing unit.

- Protect a friendly unit's flank.

- Participate in an economy of force effort.

The two types of delay operations are shown in figures 36 and 37.

FIGURE 36.   DELAY FROM SUCCESSIVE POSITIONS.

INITIAL DELAY POSITION

SECOND DELAY POSITION

ENEMY

ENEMY

ENEMY

STEP 1
ELEMENTS OF DELAY-
ING FORCE DISENGAGE
AND MOVE TO REAR TO
ORGANIZE THE NEXT
POSITION.

STEP 2
ELEMENTS REMAINING
IN CONTACT FIGHT TO
REAR WHILE MAINTAIN-
ING CONTINUOUS CON-
TACT.

STEP 3
ELEMENTS REJOIN PAR-
ENT ORGANIZATION AT
THE NEXT DELAY POSI-
TION AND CONTINUE THE
DELAY.

FSCOORD Considerations

The FSCOORD considerations unique to delaying operations are listed below.

Fire Support Tasks. For delaying operations, the FSCOORD should consider these fire support tasks:

- Attack enemy forces far forward.

- Assist maneuver elements in disengagement.

- Support limited counterattacks by fire.

- Cover obstacles, barriers, gaps, and flanks with fires and scatterable mines.

- Provide maximum continuous fires for maneuver forces as they displace to the rear.

- Mass fires to slow the enemy as he deploys to concentrate for attack of delay positions.

Command and Control. In delaying operations, decentralized control is preferred. In some cases, attachment of an FA may be necessary. When attached, the FA is weighted to enhance the combat power of the force.

FIGURE 37. DELAY FROM ALTERNATE POSITIONS.

STEP 1
ELEMENTS OF THE BRIGADE ORGANIZE THE INITIAL AND SECOND DELAY POSITIONS.

STEP 2
ELEMENTS FROM THE INITIAL DELAY POSITION DELAY BACK THROUGH THE SECOND POSITION TO THE THIRD DELAY POSITION.

STEP 3
ELEMENTS AT THE SECOND POSITION PICK UP THE DELAY. THE THIRD DELAY POSITION IS OCCUPIED.
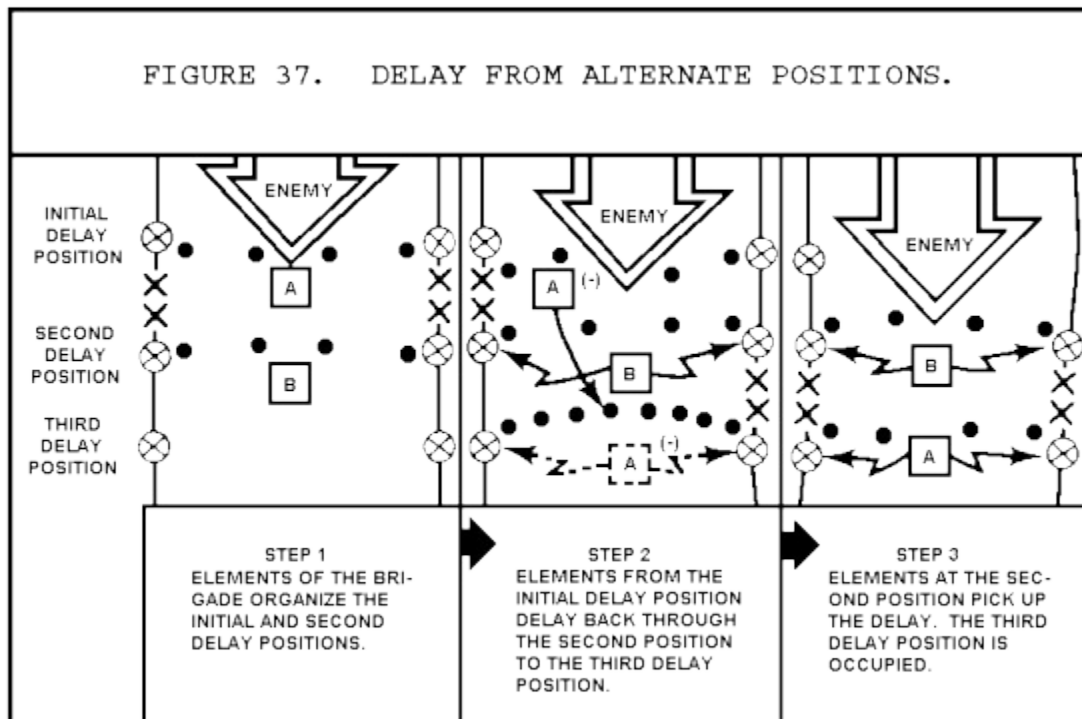
Fire Support and Planning Coordination. Initially, fire support assets are positioned to exploit range. Later, they should be echelon in depth to provide maximum continuous fire. As part of fire support planning and coordination, the FSCOORD should also plan fires:

- On barriers and natural obstacles.

- To create obstacles with scatterable mines.

- To support strong points.

- To cover and screen withdrawals. Smoke will be used extensively.

- To support hasty counterattacks.

- On enemy forces congested behind obstacles/minefields and to slow breaching attempts.

Use immediate close air support to assist in disengagements and to slow advancing enemy forces.

Employ O/L teams in overwatch positions to designate laser- guided munitions.

Withdrawal Operations

In a withdrawal under enemy pressure (figure 38), the supported force must fight to disengage. The main body disengages and moves to the rear using fire and maneuver. A covering force remains in place to cover the main body's withdrawal. The covering force then disengages on its own and rejoins the main body.

The mission of this overwatch force is to provide security for the withdrawing unit and to deceive the attacker by simulating normal fires, radio traffic, and other activities.

The support field artillery must consider leaving a portion of its weapons forward to provide fires for the overwatch force. When practical, these FA units should be of representative caliber to provide ammunition options for engagement of enemy forces.

A withdrawal not under pressure requires the effective use of security. Its success depends primarily on deception and speed of execution. It may be accomplished by stealth, in conjunction with a nuclear or ground attack, or any other event that diverts the enemy's attention.

Successful withdrawals are normally limited to periods of darkness or poor visibility. The withdrawing force must make plans to conduct the operation under pressure if surprise is lost. Fires to support this type of withdrawal are planned as they are for a withdrawal under enemy pressure, but are kept on-call in case surprise is lost.

FIGURE 38.   WITHDRAWAL UNDER ENEMY PRESSURE.

A US mechanized brigade is conducting a withdrawal under pressure to move to defensible terrain to the south. The maneuver's basic concept Involves successive coordinated engagements of the enemy force from forward company-size battle positions followed by withdrawals to succeeding delay positions.

The brigade FSCOORD and his FSOs must consider fire support tasks both for the delay and for withdrawal under pressure. Fire support planning and coordination must be continuous to accomplish the fire support tasks. In this example, fires are planned and executed in depth to engage targets as far forward as possible to force the enemy's deployment for a deliberate attack on each position. Before decisive engagement, the supported force withdraws to the next position. Fires from all available fire support means, employing a variety of munitions, should be massed to assist the disengagement by pinning down enemy forces to discourage pursuit.

Throughout the operation, the brigade FSCOORD determines through an analysis of the factors of METT-T, that additional fire support is needed for withdrawing forces. He and the S3 decide to control positioning and displacements of the firing batteries of his battalion and the reinforcing artillery battalion. Movement is mostly by battery. A combination of short tactical and survivability moves is used as necessary to ensure that fire support units stay in range of the targets being acquired. Other movement considerations are to avoid interference with maneuver forces, to avoid untimely moves, to facilitate future operations, and to maintain communications. These considerations will help to ensure that maximum availability of fire support is maintained.
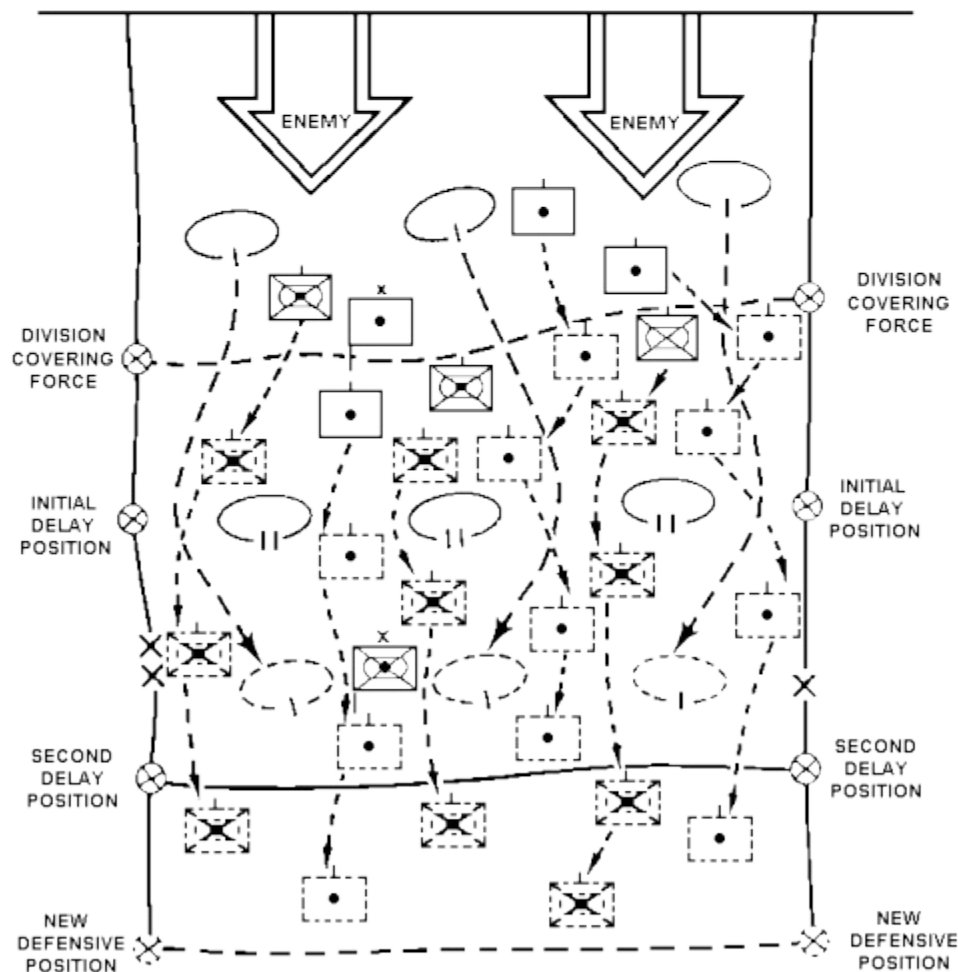
FSCOORD Considerations

FSCOORD considerations unique to withdrawal operations are listed below.

Fire Support Tasks. Among the fire support tasks unique to withdrawal operations, the FSCOORD must consider the types of ammunition to support the withdrawal. He should:

- Use smoke to screen friendly withdrawal.
- Use HE and DPICM to suppress direct fire weapons and slow obstacle/minefield breaching attempts.
- Use scatterable mines to block enemy pursuit.

He should also ensure that FA is weighed to enhance combat power of the force.

Command and control for a withdrawal is similar to that of a delaying operations.

Fire Support Planning and Coordination. Plans and orders must be prepared for the withdrawal. These should cover:

- Subsequent positions to be occupied.
- Routes to be used in the withdrawal.
- Times and priorities for withdrawal of fire units.

Provision must be made for security force fire support to assist disengagement. Smoke will be used extensively. Other planning and coordination considerations parallel those for a delaying operation.

Retirement Operations

A retirement is a retrograde operation in which a force that is not engaged conducts either a tactical or an administrative move to the rear. In a retirement, FA battalions are given general support missions for direct support to their associated brigades. To facilitate execution of on-order missions, FA battalions with on-order DS missions are sequenced to move with their associated maneuver brigades.

FIRE SUPPORT FOR OTHER OPERATIONS

Purpose of Other Operations

Other tactical operations conducted for a wide range of purposes are routinely undertaken during offensive, defensive, and retrograde actions. Each of these operations will usually require fire support. They may involve special considerations for the FSCOORD. This section will address fire support unique to:

- Relief in place.

- Forward and rearward passages of lines.

- Security and reconnaissance operations.

- Encircled forces.

- Linkup operations.

- River crossings.

- Air assault operations.

NOTE: The provision of STANAG 2082 pertaining to the fire support responsibilities and tasks are implemented in this section.

Relief in Place

Supported maneuver forces conduct a relief in place to remove units from combat. Two options exist for the use of FA fires during a relief in place.

The first option is to retain the FA fires of the outgoing force until the latest possible moment. This option enables the outgoing force to continue firing in support for the duration of the operation.

The second option occurs if the relief is deliberate and spread across several days. In this case, some of the outgoing FA may be relieved each day. When practical, field artillery being relieved stays in place until all maneuver units of the outgoing force have been relieved.

If the relief is for the purpose of continuing the attack, field artillery from both the outgoing and incoming forces remains in support.

The following principles apply to all relief operations:

- The relief section remains under the control of the outgoing commander until all his forward elements are relieved.

- Normally, the CP of the incoming commander is collocated with that of the outgoing commander. Both commanders are collocated at the relief.

- Liaison and communications between outgoing and incoming FSEs are established.

- SOPs are exchanged by outgoing and incoming units.

- Existing fire plans are passed to the incoming FSCOORD.

- Arrangements are made for the exchange of equipment/supplies.

- Routes and times for the withdrawal of the outgoing field artillery are established.

FSCOORD Considerations

FSCOORD considerations unique to the relief in place are listed below.

Fire Support Tasks. The FSCOORD must:

- Arrange for an exchange of outgoing and incoming FSE liaison personnel.
- Provide incoming field artillery with existing fire plans.
- Determine the need for smoke and other types of ammunition.
- Establish how the outgoing field artillery will be relieved.
- Establish how the outgoing field artillery will contribute.

Command and Control. If the outgoing field artillery and the supported command are relieved at the same time, responsibility for fire support passes at the time of that relief. If command of the field artillery and command of the supported maneuver units are passed at different times, the passing of fire support responsibilities is mutually agreed upon by the two FSCOORDs unless otherwise directed.

Fire Support Planning and Coordination. The outgoing force passes fire plans to the incoming force so that plans can be continued. Other fire support planning and coordination FSCOORD considerations are to:

- Prepare and disseminate plans to support the incoming force.
- Make available to all concerned fire planning SOP items of the incoming force.
- Make arrangements for the incoming force to use targeting lists and means of the outgoing force.
- Ensure that fires have been planned to support/emplace a barrier or an obstacle to slow an advancing enemy. This may include using scatterable mines.
- Use COLTs in overwatch positions to designate for laser guided munitions.
- Plan smoke fires to screen friendly movements.

Passages of Lines

The passage of lines may be a forward or a rearward passage. A forward passage of lines is an operation in which supported elements attack through another maneuver force that is already in contact with the enemy. A rearward passage of lines is an operation in which a unit effecting the rearward movement passes through the sector of a unit occupying a defensive position to the rear.

The planning and execution procedures for a rearward passage of lines are the same as those described earlier for the withdrawal of a covering force through an MBA force in the defense. Fire support by the unit in place is critical to the withdrawing unit. Use of FA liaison and communications channels facilitate this support. Many of the considerations that apply to the relief also apply to passage of lines. FSCOORD considerations in both forward and rearward passages are listed below.

Fire Support Tasks. FSCOORD fire support tasks are to:

- Establish a time for the change in fire support responsibilities. This time must correspond to the time of the change in maneuver commanders.

- Establish areas for the passage. Concentrate combat power in those areas.

- Establish fire support assistance required from the outgoing force and assign tasks.

- Establish need for secrecy.

- Make plans for tactical cover and concealment.

Command and Control. Fire support responsibilities may be passed to the incoming FSE before passage starts.

Fire Support Planning and Coordination. The FSCOORD should plan and coordinate fire support so that:

- The outgoing force passes its fire plans to the FSE of the incoming force.

- The incoming FSE passes fire support requirements to the outgoing FSE and disseminates any new fire control measures to be used.

- The target acquisition means of the outgoing force reinforce those of the incoming force.

- Fire request and coordination channels must be planned early to facilitate change of FSCOORD responsibilities at the change of command and control.

- Combat observation/lasing teams (COLT) should be used in overwatch positions to designate laser-guided munitions.

Security and Reconnaissance Operations

In the AirLand Battle operations, support maneuver levels require effective security and reconnaissance operations to achieve success. Fire support assistance is required in both security operations and reconnaissance operations.

Security Operations

Security is achieved by the detection of the threat in sufficient time and space for the friendly forces to react. Thereby, friendly forces will be able to avoid, neutralize, and/or destroy the enemy. The actions of security forces are guided by the following fundamentals:

- Provide timely and accurate warnings.

- Provide space for maneuver.

- Orient on the locations and movement of the supported force.

- Perform continuous reconnaissance.

- Maintain contact with the enemy.

Fire support may be needed for covering force, guard forces, and screening forces. When these maneuver elements operate beyond the main force, field artillery may be attached to the supported security forces. The force FA commander then becomes the force FSCOORD.

FSCOORD Considerations

FSCOORD considerations unique to security operations are listed below.

Fire Support Tasks. For security operations, the FSCOORD must consider that fire support must be highly responsive to security forces.

Fire support tasks during security and reconnaissance operations are:

- Fire support means must have the mobility equal to that of the supported force.

- Fire support communications means must be flexible.

- Support for the covering force.

- Secrecy will often dictate the nature of operations.

Command and Control. When distance so dictates, field artillery is attached to the supported force to enhance responsiveness.

Fire Support Planning and Coordination. The FSCOORD should use these guidelines when planning and coordinating fire support for security operations:

- Fires should be planned to cover the security operations of the force.

- Suppression fires (to include smoke) may be used to screen movements/areas.

- Illumination fires may be needed during night operations.

- Aerial observation and sensors may be used.

- Tactical air reconnaissance aircraft can assist in most operations.

- Indirect fire weapons should be positioned to allow massing of fires in the area of concern.

- Observation/lasing teams should be used as observers and designators for laser-guided munitions from overwatch positions.

Reconnaissance Operations

Reconnaissance operations are used to gather information. Fire support contributes to the reconnaissance efforts by using aerial and ground observers, sensors, and radars to gather combat information and intelligence.

FSCOORD considerations unique to reconnaissance operations are listed below.

Fire Support Tasks. Fire support assist a supported reconnaissance force by:

- Orienting on the location or movement of the reconnaissance objective.

- Reporting all information accurately and rapidly.

- Assisting the force to retain freedom to maneuver.

- Gaining and maintaining enemy contact.

- Developing a situation rapidly.

Fire support must have mobility equal to that of the supported force. The fire support system must provide sufficient combat power to cause the enemy to react. Reconnaissance by fire efforts may be used to cause the enemy to react. Fire support may also be used to exploit reconnaissance in force successes.

Command and Control. Attachment of FA assets to the supported force should be considered to enhance responsiveness.

Fire Support Planning and Coordination. These considerations parallel those for security operations. Indirect fire weapons are positioned to support all areas of concern and to come under the protection of the supported maneuver elements.

Encircled Forces

Supported maneuver elements cut off from the main force may become encircled. These forces have two options: to defend encircled, or to break out toward friendly forces. Encircled forces require fire

support to survive and/or to break out of the encirclement. Field artillery in the encirclement must be reorganized and brought under centralized control. Fire support communications nets must be reestablished quickly. Indirect fire elements may be repositioned to better ensure their survivability and the all-around effectiveness of their fires.

Some of the FSCOORD considerations unique to defense of an encircled force are listed below.

Fire Support Tasks. The FSCOORD must reorganize all available fire support. With the force commander, the FSCOORD should determine the most critical areas in the defense, future breakout plans of the force, and the amount of outside help available. Then, fire support should be prepared for the breakout.

Command and Control. Centralized control of field artillery assets is desired.

Fire Support Planning and Coordination. For defense of an encircled force, the FSCOORD must:
- Plan fires for both the defense and the subsequent breakout.
- Effect coordination with outside contributors to the fire support effort.
- Use fire support for deception, if necessary.
- Establish fire control and safety measures. Restrictive fire lines between friendly forces may be needed.
- Coordinate radar sectors of search for 6400-mil coverage.
- Position encircled indirect fire weapons where they can best support the breakout operation.
- Plan the use of chemical or nuclear munitions if force attrition and the political situation favor their employment.
- Use close air support and precision guided munitions extensively during the breakout.
- Plan mass fires at breakout points to enhance momentum.

Linkup Operations

Linkup operations serve to join two friendly forces. The two may be moving toward each other, or one may be stationary.

The controlling higher headquarters of both forces establishes the command relationship between the two forces and the responsibility for each. It also establishes the control measures to be used. The support coordinating measure most common to a corps-controlled linkup is the restrictive fire line.

Forces that are linking up exchange as much information as is practical before an operation. Considerations may include:

- Fire support needed before, during, and after linkup.

- Recognition signals and communications needs for both forces.

- Future operations following the linkup.

FSCOORD considerations unique to linkup operations are listed below.

Fire Support Tasks. The FSCOORD must ensure that all fire support personnel know the fire control measures and recognition signals for the linkup. He must also ensure that the fire support personnel are continuously aware of the progress of the linkup forces.

Command and Control. Centralized control of fire support is desirable. Communication net must be adequate for the control of fire support at all levels.

Fire Support Planning and Coordination. The FSCOORD must plan and coordinate to ensure that:

- Most planned fires are short of the restrictive fire line.

- Targets beyond the restrictive fire line must be cleared for attack by the controlling headquarters.

- Smoke and illumination fires must not cause adverse effects on other friendly forces.

- Fires must ensure that the enemy force between the two friendly forces cannot escape. The use of scatterable mines should be considered to block enemy withdrawal.

- Indirect fire weapons are positioned to allow them to mass fires at linkup points.

- Positions should afford each access to routes to be used after linkup.

River Crossings in Offensive Operations

Offensive crossings can be either hasty or deliberate. Each requires fire support. The hasty crossing uses the means at hand. It is a prearranged operation based on limited prior planning. The planning does include, however, ways in which fire support will assist the supported force in maintaining its momentum. The deliberate crossing requires extensive planning and detailed preparation.

FSCOORD considerations unique to both types of offensive crossings are listed below.

<u>Fire Support Tasks</u>. For river crossings, the FSCOORD must:

- Make fire support immediately available to crossing forces.

- If necessary, have general support weapons take over DS roles during crossing by DS field artillery.

- Plan smoke and suppression fires in greater than normal amounts, if necessary.

- Follow river crossing SOPs in planning fire support.

- Accomplish long-range planning at corps and short-range planning at lower levels.

- Have indirect fire weapons cross the river with forces they support.

<u>Command and Control</u>. Centralized control is desired. Procedures to request, control, and coordinate fires must be designated to provide continuous fire support when habitual close support battalions cross the river.

<u>Fire Support Planning and Coordination</u>. The FSCOORD must consider the following factors when planning and coordinating fire support for river crossings:

- Fire plans are based on the type of crossing announced by the commander.

- Plans are commensurate with visibility conditions that will prevail during crossings.

- The width of the crossing area will affect planning.

- Fire plans are made to soften enemy defenses at crossing sites and to seal off far bank positions.

- Aerial observers and aerial sensors contribute heavily to the targeting effort.

- Indirect fire weapons are positioned close to the river obstacle in the offense in order to extend their fires on the far side.

- Far bank positions are occupied when these positions are out of range of enemy small arms fires.

- Smoke is planned to obscure both actual and decoy crossing sites and to screen friendly movements.

- Close air support assists in establishing a beachhead on the far side of the river.

Retrograde River Crossings

A river crossing conducted in conjunction with a retrograde operation is divided into three segments, which take place simultaneously. They are the delay, the defense, and the crossing.

The delay allows the main force to retrograde rapidly across the river barrier. It trades time for space. Indirect fire units may be attached to the delay force (elements left in contact). Elements not assigned to the delay execute withdrawal and retirement across the river. They assume tactical missions after the crossing. The delay is continued until the battle is within communications and fire support range at the exit bank defensive area.

A division defensive force consists of elements not engaged in the delay. It is augmented by resources from corps. The defense masses combat power to enable the elements left in contact to complete their retrograde crossing.

In the crossing, the crossing area command ensures a continuous and orderly flow of retrograde elements across the river. Coordination between the delay commander and the defense commander is necessary. A crossing plan supports both the delay and the defense plan.

FSCOORD Considerations

FSCOORD considerations unique to the support of retrograde river crossings are listed below.

Fire Support Tasks. Most of the considerations for an offensive crossing also apply to the retrograde crossing. Tasks relating to retrograde operations in the defense also apply. Fire support must be available to both the delay force and the defensive force independently.

Command and Control. More centralized control is needed for the retrograde crossing than for the offensive crossing. Fire support units attached to the delay force are detached following crossings and rejoin the defensive force. Fire control measures are used to open up and close off areas for the delay and the defense. General support units take over DS responsibilities when DS units cross. Restrictive fire measures ensure the safety of withdrawing elements from adverse effects of fire support weapons systems.

Fire Support Planning and Coordination. Many of the following considerations for offensive crossings also apply to retrograde crossings:

- Holding lines are established on defensible terrain between the river and the enemy. These lines preclude enemy direct and indirect observed fires on crossing sites. Fire support contributes to this holding action.
- Fires are rapidly concentrated to allow disengagement and subsequent withdrawal by the elements in contact.
- Defensive fires are planned to assist in successful completion of the retrograde river crossing.
- Scatterable mines may be used to deny approaches to the enemy.

- Aerial observers and airborne sensors are used extensively in this effort.

- After their crossings, target acquisition assets with the delay force usually operate under the defensive force.

- Indirect fire weapons supporting the deadly force take up positions to reach out with long-range fires. They cross with the delay force according to a predesignated schedule. Weapons supporting the defense take over their fire support fires while they cross.

- Weapons supporting the defense are positioned at staggered depths behind the river barrier.

- Smoke fires may be considered to screen friendly movements across the river.

Air Assault Operations

Divisions and corps form air assault task forces (AATFs). The AATF is designated for a specific mission; it consists of an infantry battalion and an aviation company. When infantry companies combine with aviation elements, they form air assault teams (AATMs).

Battalion level is the lowest maneuver echelon having adequate personnel to plan and control an air assault operation.

Air assault operations take the form of or support:

- Hasty and deliberate attacks.

- Secure and defend missions.

- Raids.

- Delays.

- Reconnaissance in force operations.

- Exploitation in force operations.

- Pursuits.

- Rear area combat operations.

Some of the FSCOORD considerations unique to air assault operations are listed below.

Fire Support Tasks. For air assault operations, the FSCOORD must take the following considerations into account:

- Initially, fire support comes from a source outside the objective area (long-range surface weapons or armed aircraft).

- Weapons moving with the AATF take up positions quickly after landings.

- Because of the heavy demand for aircraft, SEAD support is critical to most operations.

- Smoke may be used for screening friendly operations and for marking purposes.

- Signals for the lifting and shifting of fire support must be known by key people.

- Fires are used to seal off objective areas.

Planning for assault operations is usually done in a reverse sequence. In the reverse sequence, the ground tactical plan, the landing plan, the movement plan, the loading plan, and the staging plan are prepared in that order. Fire support is integrated or considered in each plan.

Command and Control. The AATF FSO usually operates in the aerial command post over the battle area. His FSE operates from the ground. Normally, the FSO is best prepared to coordinate fire support from the air. The FSO in the air needs good communications and ready access to all FA assets. Fire support channels must be adequate for air and ground control of fires. The lifting and shifting of fires require close control. If aircraft control measures are used along a flight route, a timing reference for fire support is needed. Usually, the aviation liaison officer assigns an arrival time for each checkpoint. The flight leader informs the aerial CP when his flight reaches a checkpoint. The FSO monitors the progress of the air column so that he can lift and shift fires accordingly.

Fire Support Planning and Coordination. Fire planning starts with the receipt of the air assault mission and continues with offensive and defensive fires. It also includes preparation fires for the objective area, SEAD fires for friendly aircraft, and high-angle fires under which aircraft can move.

Fire support coordination must take into account that:

- Flight control measures most commonly include flight routes, flight corridors, and airspace coordination areas.

- An airspace coordination area (ACA) may be used to create "safe boxes in the sky."

- Remotely piloted vehicles (RPVs) may be used if flight routes and objective areas do not exceed their range.

- Use of mutually supporting landing zones (LZ) should be explored.

- Indirect fire weapons may support from a separate (preferably more secure) landing zone.

- Indirect fire weapons may accompany air assault elements landing with them within or near the objective area.

- Long-range indirect fires may be available from weapons positioned with the main force.

Landing Zone Preparation

There are four methods of preparing a landing zone. These methods are discussed in the following paragraphs.

Field Artillery Marking Rounds on Far Side of Landing Zone. A flight leader reports that the lift flight has reached the initial point. Field artillery, at the direction of the fire support officer, marks the landing zone for a tactical air strike. The forward air controller monitors the fire support officer's fire direction net. He confirms the target location and gets clearance for the strike to start.

Subsequent corrections are relayed through the forward air controller (see Figure 39).

FIGURE 39. ARTILLERY FAR SIDE LANDING ZONE PREPARATION
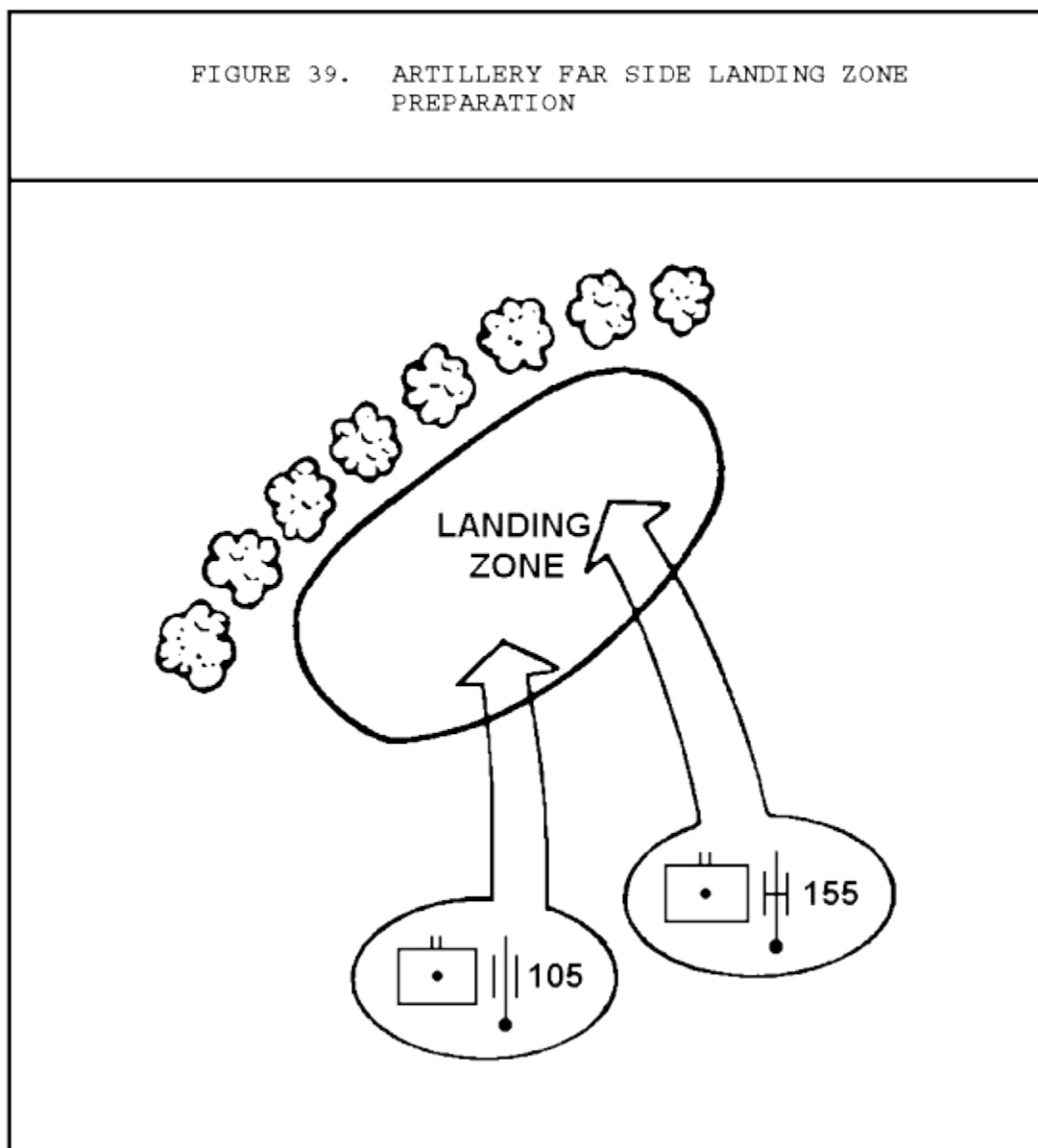
Field Artillery and Tactical Air Preparation at the Same Time. To ensure that the preparation fires on the landing zone are adequate, timely, and safe, the fire support officer must establish:

● Reliable communications.

● Positive control over his fire support element.

● Detailed coordination with the aviation element of the supported force.

When naval gunfire is available, it is controlled and adjusted by the fire support officer through naval gun fire (NGF) liaison personnel in the fire support element (see Figure 40).

FIGURE 40.   ARTILLERY AND TACTICAL AIR PREPARATION
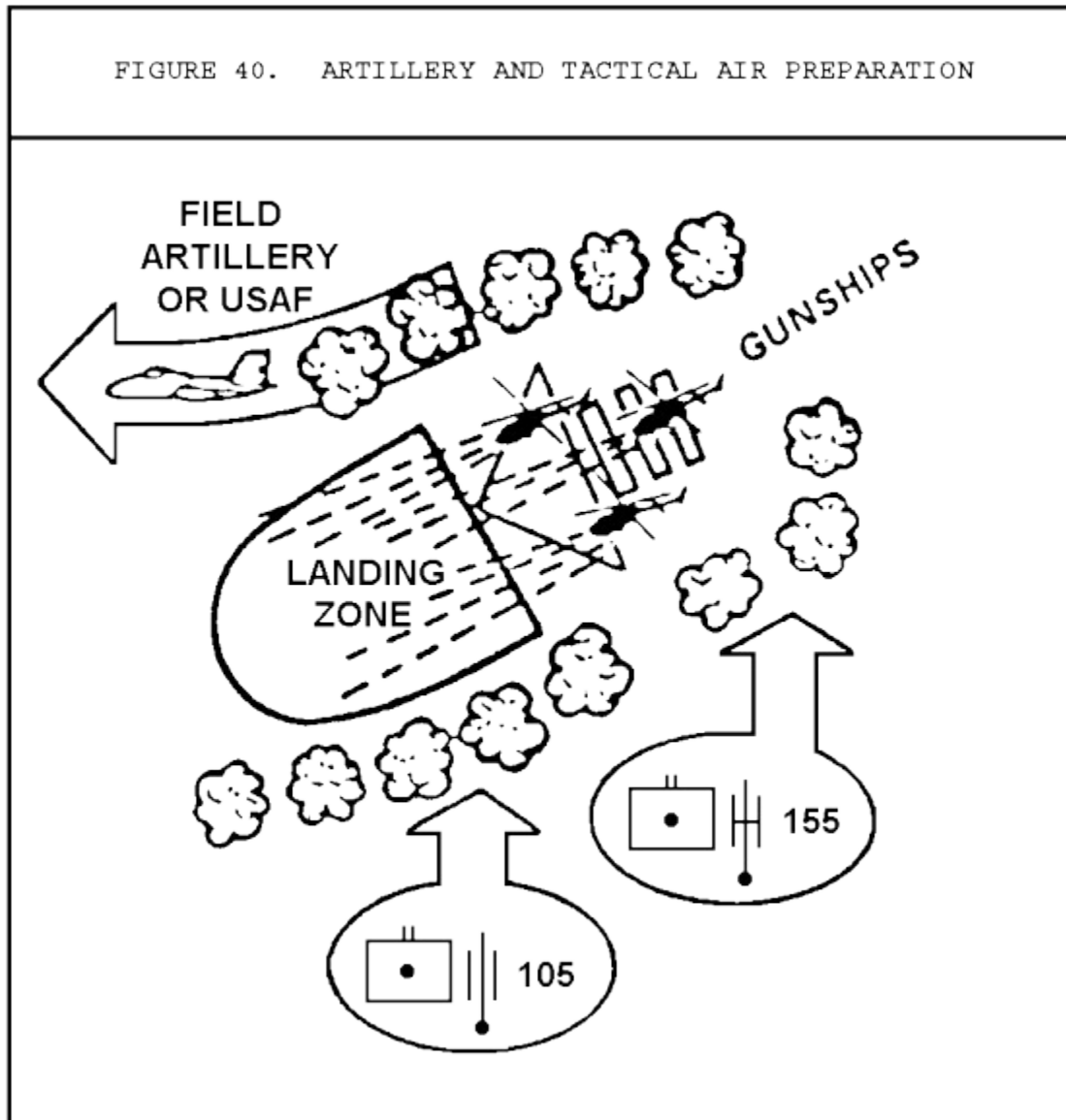
Blocking Fires--Tactical Air, Artillery, and Gunships. Escort gunships provide security for the lift helicopters during the loading, movement, and landing phases. They are used when neutralization fires are needed or when a combination of air and ground protection is essential. If allocated as a fire support means, gunships may be used to soften up a landing zone. At the prearranged time, the aerial weapon flight leader checks into the fire support officer's fire direction net and reports when he is ready for action (see Figure 41).

FIGURE 41. BLOCKING FIRE
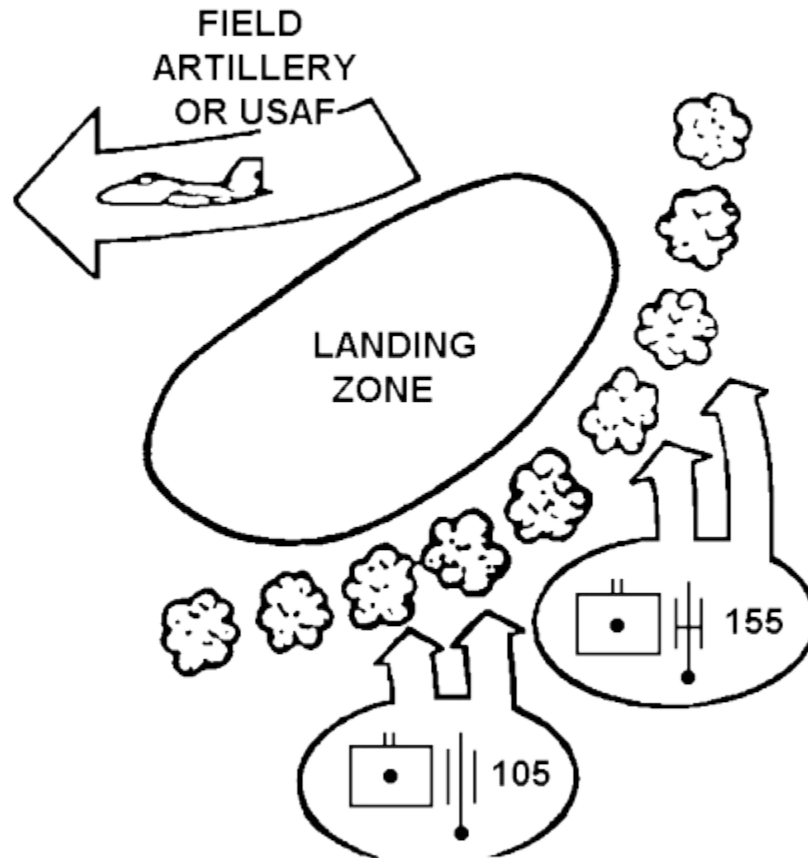
<u>Suppressive Fires by Lift Flight</u>. The lift helicopter flight leader reports his arrival at the release point. The fire support officer causes the air strike to be lifted and indirect fires to be shifted a safe distance from the landing zone. He clears the aerial weapon gunships, which precede the lift (see figure 42) helicopters, to deliver their fires on the landing zone. Once the aerial weapon gunships have delivered their fires, they proceed to a predesignated orbit point to await on-call mission or to rejoin the lift helicopters as they depart the landing zone.

FIGURE 42. SUPPRESSIVE FIRES.
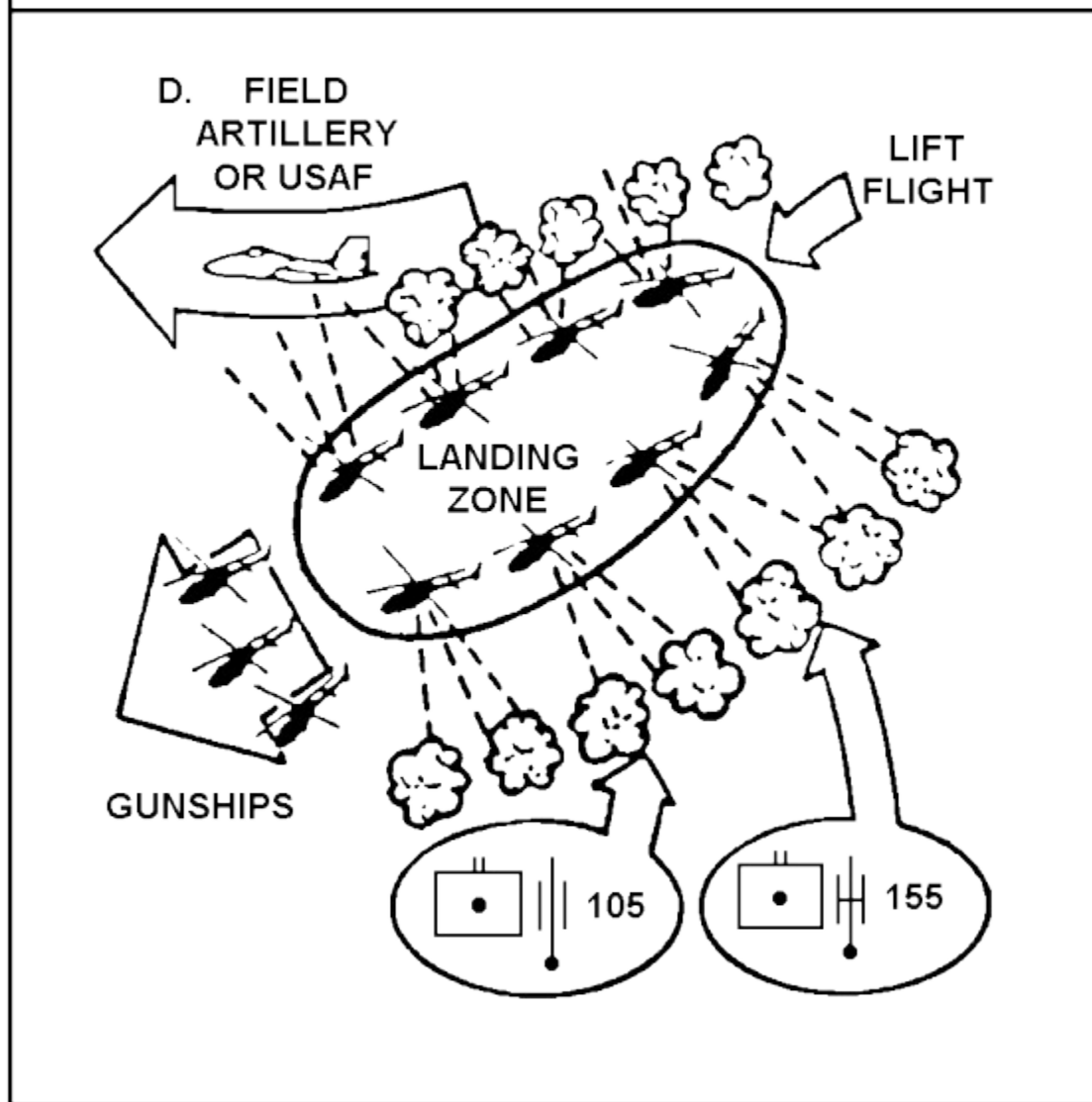
MILITARY OPERATIONS ON URBANIZED TERRAIN

The massive growth in urban areas and man-made changes in the landscape will significantly affect the conduct of future battles, especially in western Europe. These areas can no longer be avoided. The defender has the advantage in the use of urban areas. He has superior protection and concealment and covered routes of movement.

The attacker can isolate and bypass some urban areas, but he must attack others. He must fight into a well-defended position. Both attacking and defending forces will take advantage of the cover and concealment offered by urban areas; however, they will be hampered by reduced visibility.

Commanders at all levels must consider the advantages and disadvantages of using urban areas within the overall concept of their operation. The decision to attack or defend an urban area may have political as well as operational impact.

Military operations on urbanized terrain (MOUT) may involve both armored/mechanized and light infantry forces.

Categories of Urban Areas

Urban areas can be divided roughly into four categories:

- Small villages (population 1,000 or less).
- Strip areas, general interconnecting areas between villages and towns along major roads and valleys.
- Towns and small cities (population up to 100,000 and not part of a major urban complex).
- Large cities with associated urban sprawl (unlimited population, covering 100 or more square miles).

Each category presents different problems and opportunities to tactical commanders. Small villages and strip areas are the categories most commonly encountered by maneuver companies and battalions. Towns and small cities will impact on the operations of brigades and divisions. Large cities and major urban complexes will affect operations at division or corps level.

Weapons Employment

Field artillery, mortars, and air support can be employed on urban terrain.

Field Artillery. The presence of buildings more than two stories high will require that high-angle fire be used to attack targets near the bottom of the buildings or in the streets. High-angle fire increases the amount of time required to get the round on target, the probability of acquisition of the firing unit by enemy counterfire radar, and the dispersion of the rounds in the target area.

Except for the M109-series howitzer, and the M110 when equipped with the ballistic crew shelter, FA weapons do not give the necessary crew protection for use in the direct fire mode in an urban area. Masking resulting from emplacement of howitzers in urban areas reduces the flexibility of the weapons to provide complete support.

Mortars. The normal high trajectory of mortars makes them excellent weapons for use in urbanized terrain. However, the penetration power of their munitions is limited. Increased use of mortars in urban fighting requires FSCOORD involvement in ammunition forecasting and resupply planning.

Air Support. Air support can give the ground commander selective and discriminating fire support. In addition to general-purpose bombs, rockets, cannons, laser-guided bombs, and electro-optically guided missiles are particularly suited for engaging hard targets. If possible, an airborne forward air controller should control strike aircraft from his better vantage point. However, ground FACs or FIST personnel trained to control close air support in emergencies can assume the task.

Munitions Effects

The effects of improved conventional munitions (ICM) and HE with variable time (VT) fuzes are severely reduced by structures. However, these munitions are effective against personnel on rooftops. High-angle fire with delay fuzing is required to penetrate buildings. Illumination, incendiary, and chemical munitions are especially effective. They are valuable in forcing the enemy out into open spaces. Smoke is used to screen movement and obscure enemy observations. Ammunition expenditures will be heavy, especially if preparatory fires are used to a great degree.

Laser-guided and other precision guided munitions permit destruction of targets with minimum rubbling of adjacent buildings. However, tall structures will not adequately reflect laser energy, thereby precluding proper activation of sensors on laser-guided warheads.

Observations

Ground observation will be limited. Observers on the ground should be assisted by aerial observers or air cavalry units. Observation posts can be established in high structures, although survivability conditions may preclude the occupation of rooftops. Multiple observation posts should be used to reduce unobserved dead space areas.

Target Acquisition Devices

Effectiveness of target acquisition (TA) devices is somewhat degraded as follows:

- Hot spots picked up by infrared sensors will be numerous and difficult to interpret.

- Side-looking airborne radar effectiveness will be reduced by the masking effect of buildings.

- Overhead aircraft reconnaissance will be vulnerable to enemy air defenses.

- Ground surveillance radar and sensors will be impaired by structures. They can be used to monitor routes into cities and activity along streets, alleys, or other open areas within cities.

- Counterfire radars should be employed to cover likely areas of enemy mortar, cannon, and rocket use.

- Because of unacceptable masking, radars will not normally be emplaced in built-up areas.

Fire Support in Offensive Operations

Offensive operations are conducted in three phases.

- Phase I. Isolate the objective.

- Phase II. Assault to penetrate the initial defense and secure a foothold.

- Phase III. Perform clearance operations.

<u>Fire Support Tasks in Phase I</u>. Interdict routes of resupply/reinforcement as follows:

- Field artillery delivers remote antiarmor mine system/area denial artillery munition (RAAMS/ADAMs) to close off routes. Copperhead is used to attack vehicles moving on routes. Field artillery and mortar smoke obscures enemy overwatch positions.

- Battlefield air interdiction is nominated by corps to echelons above corps for use on reserve assembly areas to destroy lines of communication.

- Air support attacks harden enemy positions on the edge of or close to the objective area.

- Electronic warfare disrupts enemy command and control and fire direction nets.

Neutralize/destroy overwatch position as follows:

- Mortars and field artillery provide SEAD and mark overwatch positions.

- Air support attacks overwatching bounders, tanks and fortifications.

- Battlefield air interdiction continues attack of reinforcement/resupply forces.

- Electronic warfare continues disruption of criticalcommunication nets.

<u>Fire Support Tasks in Phase II</u>. In planning a preparation, the tactical advantages and disadvantages of firing an extensive preparation must be weighted carefully. Preparations have a devastating physical and psychological effect on the defender. However, the increased rubble hampers the offensive operation. Use of laser-guided bombs and projectiles helps limit destruction of buildings adjacent to targets.

The protection afforded the defender by buildings may require extensive use of air support and heavy artillery to neutralize enemy positions. An extensive preparation requires moving ammunition to forward firing positions and prestocking, if tactically permissible. Such logistical actions ensure the availability of ammunition to support clearance operations.

Field artillery and mortars attack enemy indirect fire assets and suppress enemy antitank guided missile (ATGM) positions on the edge of a built-up area. Use smoke to screen the assaulting force and to obscure remaining enemy overwatch positions.

Use of battlefield air interdiction is nominated by corps to echelons above corps to prevent enemy withdrawal, reinforcement, and resupply. Air support attacks hardens positions in the objective area. Electronic warfare jams enemy command and control and fire direction nets.

Field artillery remains outside the urban area during phase II. Control of field artillery is more centralized in this than in other types of offensive operations. Centralization provides flexibility in shifting and massing fires. Attacking brigades are provided their normal DS battalion of field artillery.

Fire Support Tasks in Phase III. Air support destroys point targets within the urban area. Laser-guided munitions are used when possible to increase accuracy. Use of battlefield air interdiction is nominated by corps to echelons above corps to isolate the objective area.

Mortars are used extensively to provide close support. The high trajectory of mortar rounds makes them particularly effective in urban fighting. Battalion fire support officers and CO FSOs must monitor mortar ammunition status. They advise the maneuver commander on its adequacy to provide the bulk of fire support as the unit advances through the area.

Field artillery provides counterfire and high-angle fires into the urban area. Individual sections/platoons of field artillery may be brought into the area to provide direct and assault fires.

NOTE

Field artillery are not tanks. When used in the urban area, they must be afforded security and should not be exposed to enemy direct fire weapons, if possible.

Currently, the M109 is the only FA weapon with built-in crew protection from fragments and small arms fire. Because of the masking created by buildings, indirect fires are severely restricted.

Fire Support Coordinating Measures. Normally, urban fighting requires use of restrictive measures in the urban area and permissive measures outside the urban area. Corps places the fire support coordination line well beyond the urban area being attacked. Placement should ensure that corps has coordinating authority for the attack of reserves, logistical facilities, and command and control facilities that may support the urban battle.

Brigade or division coordinated fire lines are placed just beyond the far edge of the town being attacked. If the attack is moving only through one edge of the built-up area initially, the coordinated fire line (CFL) may be extended around the sides of the town/city.

On-order CFLs should be planned beyond the initial CFL to support the force once the area has been cleared. These lines are rarely used within an urban area in the attack, since uncoordinated attack of targets may hinder the operation by creating rubble and fires.

A restrictive fire area may be necessary to limit attack to chemicals or munition with limited bursting effects to preclude unacceptable rumbling. For example, a restriction may be placed on the use of 203-mm HE rounds with point detonating fuzes or on the use of WP to preclude fires. If the attack could

result in friendly forces converging on each other, a restrictive fire line is recommended to the maneuver commander.

The FSCOORD must coordinate with the G5 and G3/S3 to determine if there are any areas in the town in which no- fire areas must be established. Examples may be refugee centers, key installations needed to support the attacking force, and national shrines.

Fire Support in Defensive Operations

Defense in urbanized terrain is similar to that in other types of terrain. When possible, a covering force is established. The urbanized area becomes the main battle area.

Support of the Covering Force. Indirect fire weapons are organized as in other defensive operations. Initial FA positioning should be forward of the urbanized area toward the covering force area. Weapons are used to attack enemy reconnaissance elements, to deliver RRAMS/ADAM, and to provide smoke to screen movement of the covering force units.

As the covering forces withdraw toward the city/town, field artillery is displaced, normally by echelon, over planned routes to prepared positions to support the main battle. When possible, field artillery should not be used in built- up areas. Tall buildings restrict its flexibility in delivering indirect fires. If field artillery must be emplaced within the city, position areas should minimize masking, provide several routes of escape, and afford as much cover and concealment as possible.

Support of the Main Battle. There are many factors to consider when planning this support. These factors are listed below:

- Suppressive fires are extremely important to degrade enemy attack on forward positions.
- FA-delivered scatterable mines are used to close gaps in obstacle/minefields and to delay enemy forces in predesignated engagement areas.
- Precision-guided munitions are used against high value point targets.
- Air support attacks enemy armor in the assaulting echelon and in overwatch positions.
- Battlefield air interdiction is used to attack enemy follow-on formations, command and control facilities, and combat service support facilities.
- Mortars provide close support as enemy forces move into the built-up area.
- Field artillery and air support create rubble in front of enemy forces as they advance.
- Field artillery and air support deliver incendiary munitions to start fires in areas of enemy occupation. Smoke from fires precludes effectiveness of enemy overwatch.
- Electronic warfare disrupts command and control and fire direction nets.

- The FSCOORD must be prepared to shift fire support to the flanks of the town to prevent any enemy efforts to encircle the area.

- The FSCOORD must prepare plans to counterattack enemy penetrations by fire and to support friendly counterattacks.

- Persistent chemicals are used, when authorized, to create contaminated areas forward of the defense.

Fire Support Coordinating Measures. The primary difference between the defensive and offensive battles in terms of these measures is the use of on-order permissive measures within the urban area itself.

Normally, corps establishes a fire support coordination line forward of the covering force area. Brigade and division coordinated fire lines are planned forward of, in, and behind the defended area. Each line should be placed in effect as the last friendly unit withdraws to a safe distance on the friendly side of the new line. Prominent streets and railroad tracks make excellent coordinated fire lines.

Normally, restrictive fire lines are not used in defensive operations, except in support of a counterattack. Restrictive lines are also used when one force is withdrawing toward the position of another friendly force. Free fire areas may be designated or placed on-order.

You have just learned about the support planning considerations and procedures for retrograde operations. Military operations are numerous, and you must know about their effects on your unit and on the enemy. In the next learning event, you will learn about illumination and smoke and how to use them in offensive and defensive maneuvers.

Learning Event 4:
IDENTIFY THE FIRE SUPPORT PLANNING CONSIDERATIONS AND PROCEDURES FOR THE EMPLOYMENT OF ILLUMINATION AND SMOKE MUNITIONS

As part of the fire planning process, the FSCOORD nominates targets that support a phase of the commander's plan. On these targets, fire is prearranged to ensure responsive engagement when requested. Although some of the planned fires apply only to offensive or defensive actions, others are appropriate to all types of operations and levels of combat.

This learning event will discuss two types of planned fires: the illumination and the smoke missions.

ILLUMINATION

Battlefield illumination gives friendly forces enough light to aid them in ground operations at night. Illumination facilitates operations for both the observer and the maneuver unit and harasses the enemy.

Illumination shells have the following uses:

- Illuminating areas of suspected enemy activity.

- Providing illumination for night adjustment.

- Harassing enemy positions.

- Furnishing direction to friendly troops for attacks or patrol activities.

- Marking targets for attack by close air support.

- "Washing out" enemy passive night systems when used at ground level.

Employment Considerations

The amount of illumination that is required for a particular mission depends on the observer-target (OT) distance; the conditions of visibility; and the size, width, and depth of the area to be illuminated. By selecting the proper illuminating pattern and by controlling the rate of fire, the observer can illuminate an area effectively with a minimum expenditure of ammunition.

The different illuminating patterns are discussed in the below subparagraphs. The rate of fire for continuous illumination and other information on the employment of illuminating shells are shown in table 5.

Illumination. The one-gun illumination pattern is used when effective illumination can be obtained by firing one round at a time. To get this pattern, the observer calls for ILLUMINATION as the type of adjustment and type of projectile.

Illumination Two Guns. The two-gun illumination pattern is used when an area requires more illumination than can be furnished by one-gun illumination. In two-gun illumination, two rounds are caused to burst simultaneously in the same place. To get this, the observer calls for ILLUMINATION TWO GUNS.
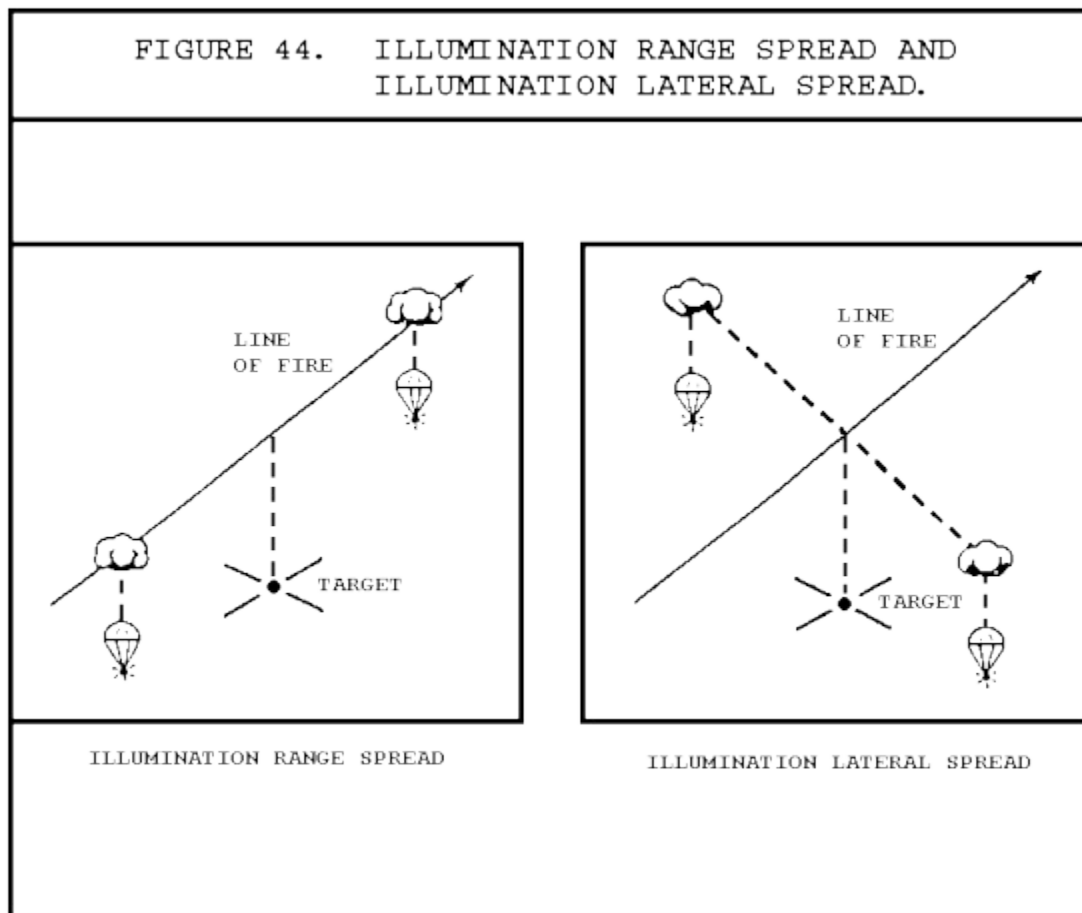
Illumination Range Spread (figure 44). The two-gun illumination range spread pattern is used when the area to be illuminated has greater depth than width as seen along the GT line. Spread illumination causes less shadow than illumination that is concentrated in one place. To get this pattern, the observer calls for ILLUMINATION RANGE SPREAD. The FDC centers the spread over the point indicated by the observer and orients the spread along the GT line.

Illumination Lateral Spread. The two-gun illumination lateral spread pattern (figure 44) is used when the area to be illuminated has greater width than depth. To get this pattern, the observer calls for ILLUMINATION LATERAL SPREAD. The FDC centers the spread over the point indicated by the observer and orients the spread perpendicular to the GT line.

FIGURE 43.
TABLE 5. EMPLOYMENT FACTORS FOR ILLUMINATING SHELLS.

HOWITZER/ MORTAR	PROJECTILE	INITIAL HEIGHT OF BURST (METERS)	DISTANCE BETWEEN BURSTS (SPREAD)(METERS)
105-mm	M314A2	750	800
105-mm	M314A3	750	800
155-mm	M118	750	800
155-mm	M485A2	600	1000
107-mm	M335	700	500
107-mm	M335A1	700	500
107-mm	M335A2	400	1000
81-mm	M301A1	400	500
81-mm	M301A2	400	500
81-mm	M301A3	600	500

HOWITZER/ MORTAR	BURNING TIME (SECONDS)	RATE OF CONTINUOUS ILLUMINATION (ROUNDS PER MINUTE)	RATE OF DESCENT (METERS PER SECOND)
105-mm	60	2	10
105-mm	70-75	2	10
155-mm	60	2	10
155-mm	120	1	5
107-mm	60	2	10
107-mm	70	2	10
107-mm	90	1	5
81-mm	60	2	6
81-mm	60	2	6
81-mm	60	2	6

FIGURE 44. ILLUMINATION RANGE SPREAD AND ILLUMINATION LATERAL SPREAD.

Illumination Range and Lateral Spread (figure 45). The four-gun illuminating pattern is used to illuminate a large area. Four rounds are caused to burst simultaneously in a diamond pattern. This pattern illuminates an area with practically no shadows or dark spots. To get this pattern, the observer calls for ILLUMINATION RANGE AND LATERAL SPREAD.

Call for Fire and Adjustment of Illumination

In the call for fire, ILLUMINATION is given as the type projectile, and the appropriate range or lateral spread is given as the distribution.

Range and deviation are adjusted by the use of standard observed fire procedures. The adjustment of the illumination to within 200 meters of the adjusting point is considered adequate because of the size of the area illuminated by the flare. Range and deviation corrections of less than 200 meters should not be made.

FIGURE 45. ILLUMINATION RANGE AND LATERAL SPREAD.
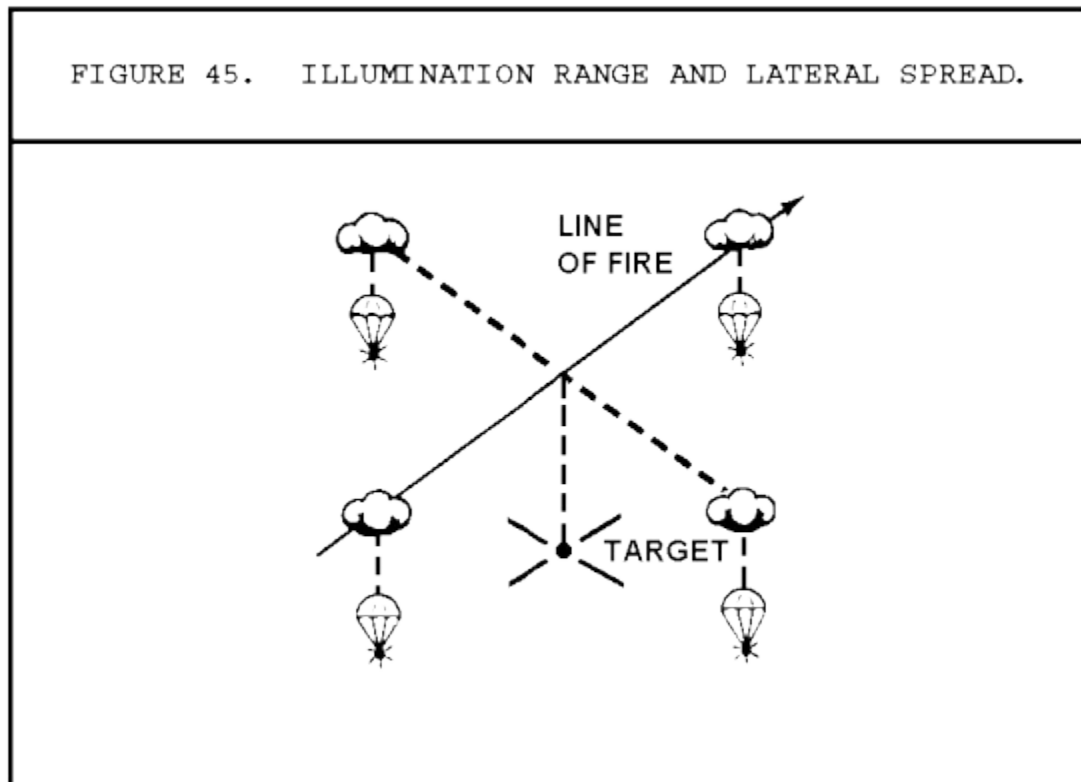
The correct position of the flare in relation to the area to be illuminated depends on the terrain and the wind. Generally, the flare should be to one flank of the area and at about the same range. In a strong wind, the point of burst must be upwind from the area to be illuminated because the flare will drift.

If the area is on a forward slope, the flare should be on the flank and at a slightly shorter range. For illuminating a very prominent object, visibility is better if the flare is placed beyond the object so it is silhouetted.

The proper height of burst is that which will allow the flare to strike the ground just as it stops burning. Height of burst corrections are made in multiples of 50 meters. Variations in time of burning between individual flares make any finer adjustment of the height of burst pointless.

NOTE

When using a night observation device, the observer should ensure that the flare burns out appreciably (100 meters) above his adjusting point to keep the device from washing out.

When burnout occurs during descent, the height of burst (HOB) correction is estimated from the height of the flare when it burned out. When visibility permits, the spotting (height of the burnout above the ground) may be measured with binoculars. The HOB spotting (in miles) is multiplied by the observer-target (OT) factor to determine the height of burnout (in meters). This height is expressed to the nearest

50 meters and is sent as a down correction. For example, the flare burns out 20 mils above the ground. The OT factor is 3; 20 mils x 3 = 60 meters = 50 meters. The correction is down 50.

When the flare continues to burn after it strikes the ground, a correction is required to raise the HOB. The length of time, in seconds, that the flare burns on the ground is counted and multiplied by the rate of descent. The product is expressed to the nearest 50 meters and sent as an up correction. For example, the flare burned 23 seconds on the ground; 23 x 5 = 115 (rate of descent for M485A2). The correction is up 100 (correction is expressed to the nearest 50 meters).

Call for Fire and Adjustment Under Illumination

When the observer has located a target suitable for HE or other fire, he initiates a call for fire in the normal manner. If no better means of designating the location of the target is possible, the burst center of the illumination can be used as a reference point.

If the observer decides to adjust the illuminating fire and the HE fire concurrently, he prefaces corrections pertaining to illumination with the word ILLUMINATION and those pertaining to HE; for example, illumination, add 200 HE, right 50, add 200.

Once the observer has adjusted the illuminating shell to the desired location, he should control the rate of fire and number of pieces firing. He should reduce the ammunition expended to the minimum required for the observation.

The observer may allow the FDC to control the firing of both illumination and HE by announcing COORDINATED ILLUMINATION in his call for fire. When the illumination has been adjusted to yield the best light on the target, the observer announces ILLUMINATION MARK to the FDC. This notifies them of the exact time the target is best illuminated. The FDC times the interval between the actual firing of the illuminating round and the receipt of the observer's ILLUMINATION MARK.

By comparing this time interval with the time of flight of the HE, the FDC can control the firing of the HE rounds. This is so that they arrive at the target during the period of maximum illumination.

As an alternate method, the observer may request COORDINATED ILLUMINATION and announce the method of control as BY SHELL, AT MY COMMAND. This indicates that both HE and illumination will be fired only at the observer's command. As soon as the FDC reports that the illumination and HE fires are ready, the observer commands the firing of illumination. Then he commands the firing of the HE so that it will impact during maximum illumination of the target. The observer can request the HE time of flight to better coordinate the firing of each round.

If the observer wants to change the method of control to allow the piece to fire illumination when ready, while he commands the firing of the HE shell, he announces ILLUMINATION, CANCEL AT MY COMMAND. An experienced observer may be able to adjust more than one HE round under each ground of illumination.

Because of the amount of ammunition expended, the least desirable method is for the observer to request CONTINUOUS ILLUMINATION. In this technique, the FDC fires illumination continuously (intervals between firing depend on the type of projectile) while the observer adjusts the HE.

SMOKE CHARACTERISTICS

When used correctly, smoke can significantly reduce the enemy's effectiveness both in daytime and at night. Smoke, combined with other suppressive fires, provides increased opportunities for maneuver forces to deploy and aircraft to attack frontline targets. This enhances mission accomplishment without catastrophic losses.

Smoke weakens laser beams and inhibits the use of optically guided missiles, such as the Sagger. Smoke is used to obscure or screen. It is also used to reduce the capability of the enemy to deliver effective fires, to hamper hostile operations, and to deny the enemy formation on friendly positions and maneuvers. The effective delivery of smoke by the field artillery at the critical time and place will help the combined arms team accomplish its mission.

The use of smoke at night must not be neglected. Enemy direct fire weapons, such as the Sagger, are equipped with night vision devices. Darkness can bring a false sense of security, which can be disastrous to the maneuver elements.

Whether used in the offensive or defensive operation, smoke can minimize vulnerability and maximize effectiveness.

Obscuring Smoke

Obscuring smoke is a smoke screen placed directly on or near the enemy primarily to suppress enemy observers and minimize their vision (refer to figure 46).

FIGURE 46. OBSCURING SMOKE.

Obscuring smoke is also used to:

- Defeat flash ranging and restrict the enemy's counterfire program.

- Obscure artillery OPs and reduce the accuracy of enemy observed fires.

- Obscure enemy direct fire weapons, including wire-guided missiles, to reduce their effectiveness down to zero.

- Obscure enemy lasers to reduce their effectiveness.

- Instill apprehension, which increases enemy patrolling.

- Slow enemy vehicles to blackout needs.

- Increase command and control problems by preventing effective visual signals and increasing radio traffic.

- Defeat night observation devices and reduce the capability of most infrared (IR) devices.

- Increase effectiveness of obstacles.

Screening Smoke

Screening smoke is a smoke curtain used on the battlefield between enemy OPs and friendly units to mask maneuvers. It is also used to confuse the enemy as to the nature of friendly operations. (Refer to figure 47).

FIGURE 47.   SCREENING SMOKE.
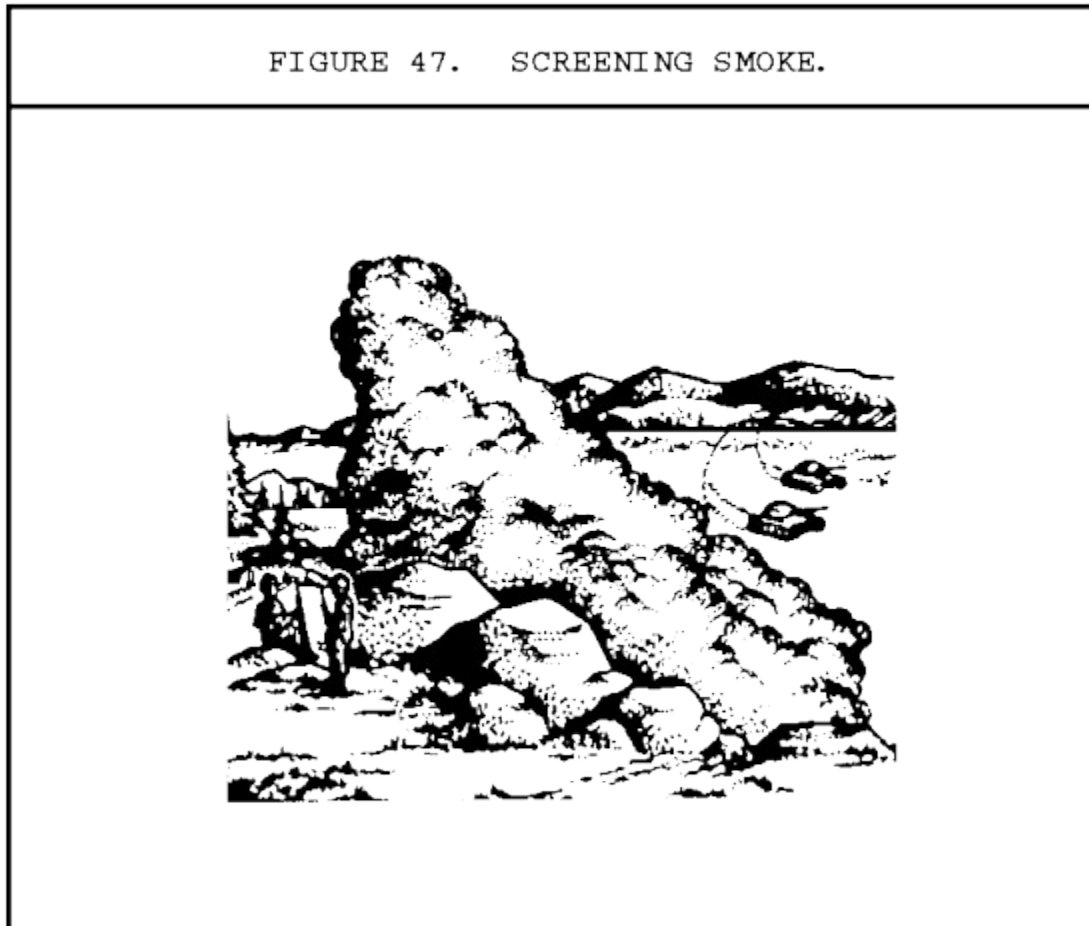
Screening smoke is also used for:

- Screening unit maneuvers. Smoke draws fire. Deceptive screens cause the enemy to disperse their fires and expend their ammunition.

- Screening exposed flanks.

- Screening area forward of the objective. Smoke helps the maneuver units consolidate on the objective unhindered by enemy ground observers.

- Screening river crossing operations. Screening denies the enemy the location of the primary crossing site. Deceptive screen deceives the enemy as to the exact location of the main crossing. (Refer to table 6).

```
                          FIGURE 48.
         TABLE 6.   FIELD ARTILLERY AND MORTAR SMOKE
                    CAPABILITIES AND EFFECT.
```

DELIVERY SYSTEM	TYPE ROUND	NOMENCLATURE	FUZE	TIME TO BUILD EFFECTIVE SMOKE	AVERAGE BURNING TIME	AVERAGE OBSTRUCTION LENGTH PER ROUND (METERS) WIND DIRECTION	
						CROSS	HEAD/TAIL
155-mm	WP	M110A2	M557	1/2 min	1-1 1/2 min	100	50
	Smoke	M116B1	M501A1	1-1 1/2 min	4 min	350	75
	Improved smoke	M825	M577	1/2 min	7 min	100	95
105-mm	WP	M60A1	M557	1/2 min	1-1 1/2 min	75	50
	Smoke	M84B1	M501A1	1-1 1/2 min	3 min	250	50
107-mm [1]	WP	M328A1	–	1/2 min	1 min	150	40
81-mm	WP	M375A2	–	1/2 min	1 min	100	40

[1] The 107-mm mortar WP projectile is a better smoker than the 105-mm howitzer WP projectile.

Non-Field Artillery Smoke Ammunition and Delivery Means

Mortars. Mortars can provide good initial smoke coverage with WP ammunition because of their high rates of fire.

Tanks. Tanks firing from overwatch positions can suppress antitank guided missile gunner at 1,500 to 3,000 meters with WP ammunition.

Delivery Techniques

Using different amounts of smoke on the battlefield against targets of various sizes requires different gunnery techniques. Use of the two delivery techniques (shown in table 7) does not preclude the use of smoke on other occasions or for different objectives.

The objective of the two prescribed techniques is to obscure the enemy's vision or screen the maneuver element.

Employment Considerations

The observer is the normal source of wind data for the target area. He determines the data (head wind, tail wind, or crosswind) on the basis of what he sees and feels. Of the factors influencing the effectiveness of smoke, atmospheric stability, wind direction, and wind speed are the major ones (Figure 50).

Atmospheric Stability. The weather conditions, the time of day, and the wind speed all affect atmospheric stability. The observer must be aware of the effect of three temperature gradients determined by the fire direction center (Figure 51).

Wind Direction and Speed. The movement of smoke depends on the speed and direction of the wind. Wind speeds ranging from 4 to 14 knots are best for the production of smoke screens. Optimum speeds vary with the type of smoke used.

FIGURE 49.
TABLE 7.   SMOKE DELIVER TECHNIQUES.

DELIVERY TECHNIQUE	TYPE OF TARGET	NUMBER OF GUNS	TYPE OF AMMUNITION	SHEAF	OBSCURATION TIME	COMMAND AND CONTROL
Immediate smoke [1] (point/ suppression)	Point or small area 150 meters or less	1 platoon [2] (2 guns)	1st rounds WP/smoke 2d rounds smoke	BCS	1/2 to 5 minutes	By SOP and/or maneuver company commander's approval
Quick smoke (small area/ suppression)	Small area 150 to 600 meters [3]	1-2-3 platoons [2]	Smoke or WP	BCS	4-15 minutes	Maneuver battalion commander's approval
Immediate smoke (mortar)	150 meters or less	2	2 rounds (each) WP	Parallel	1-3 minutes	By SOP and commander's approval
Quick smoke (mortar)	150-600 meters	3 (81-mm section) 3 (107-mm section) 6 (107-mm platoon)	WP	Parallel or open/ special (as required)	4-15 minutes (depending on ammunition availability)	Battalion

[1] The immediate smoke technique can be used in an immediate suppression mission on a target of opportunity. By unit SOP, a mix of WP and hydrochloroethane (HC) normally will follow the initial suppression rounds when immediate smoke is requested.
[2] Responsiveness dictates that both immediate and quick smoke missions be fired by platoon.
[3] For larger areas, consider multiple aiming points and use of the quick smoke technique.

FIGURE 50.   FACTORS THAT AFFECT SMOKE EMPLOYMENT.

WIND SPEED

WIND DIRECTION

AIR TEMPERATURE

HUMIDITY AND PRECIPITATION

AMMUNITION
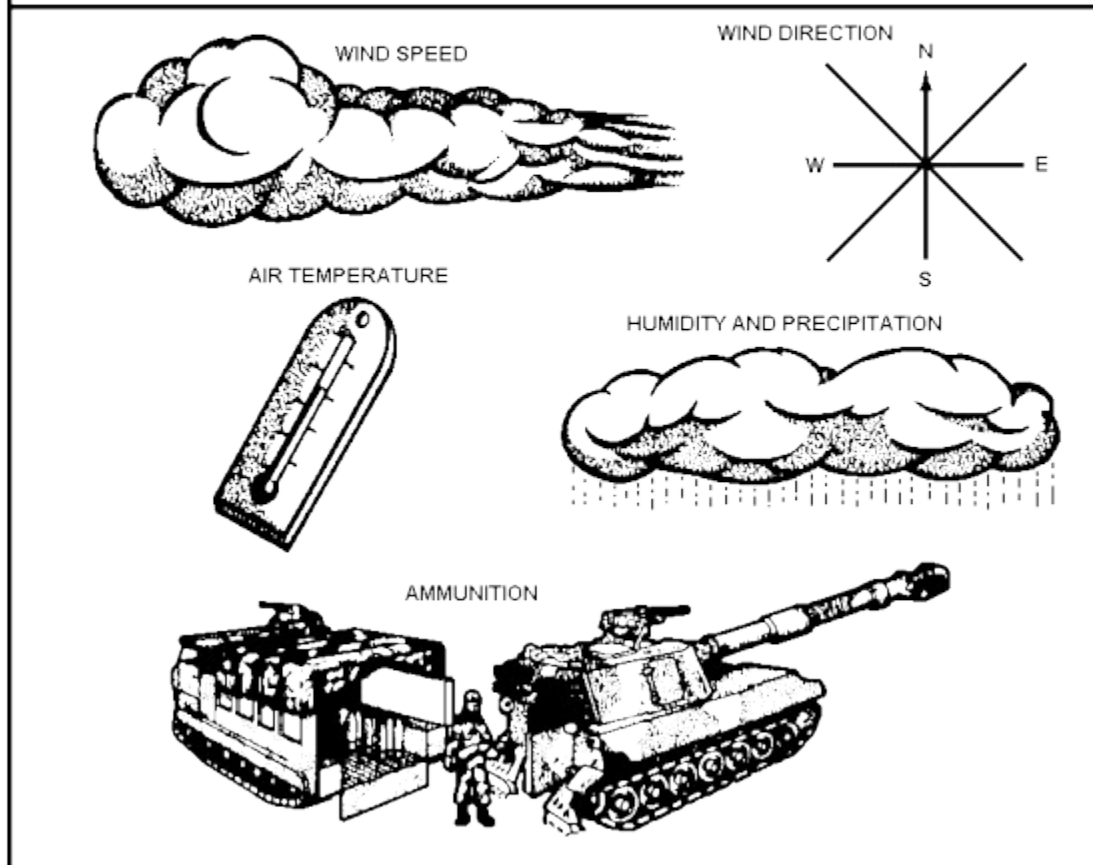
Wind direction influences the desired location of smoke in the target area. To determine the approximate wind speed, the observer can use either the equivalent wind scale table or the grass drop (expedient) method. With the grass drop method, the observer extends his arm downwind and drops grass from his hand. He points his extended arm at the dropped grass on the ground. He then divides the angle (in degrees) between the arm and the body by 4 to determine the approximate wind velocity in knots.

To determine the wind direction in the target area, the observer watches for drifting of smoke or dust, bending of grass or trees, and ripples on water. He must determine the wind direction in relation to the maneuver target line. The wind direction needs to be determined only in terms of crosswind, head wind, or tail wind.
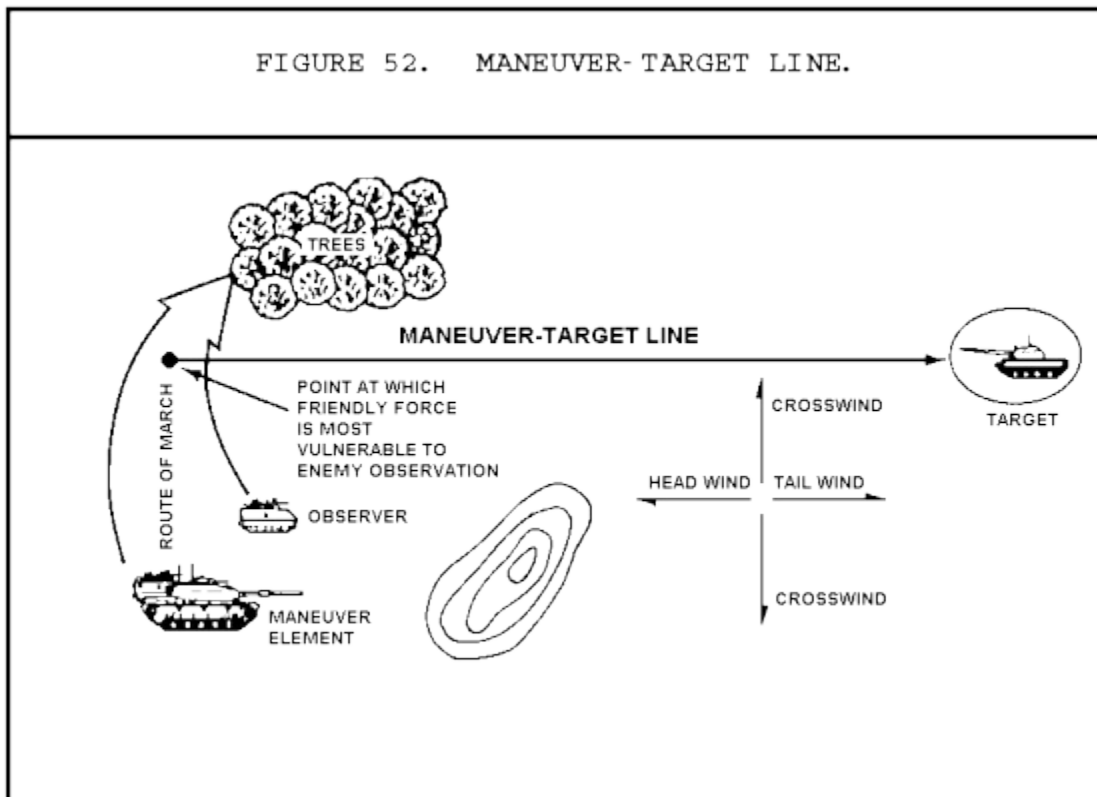
FIGURE 51. GENERAL ATMOSPHERIC CONDITIONS AND THE EFFECTS ON SMOKE.

SMOKE CONDITION (TEMPERATURE GRADIENT)	TIME OF DAY WEATHER CONDITIONS	EXPECTED SMOKE BEHAVIOR AS THE SMOKE DRIFTS DOWNWIND (WIND DIRECTION ➤➤)
IDEAL (Inversion)	1. NIGHT—until 1 hour after sunrise. 2. Wind speed less than 5 knots. 3. Sky cover less than 30 percent. ALL THREE CONDITIONS MUST BE MET.	Stable condition—ideal for smoke employment.
FAVORABLE	This condition occurs most often 1-2 hours before and after sunrise and when the wind speed is 5 knots or more and/or the sky cover is 30 percent or more.	Neutral condition—favorable for smoke employment.
MARGINAL (Lapse)	1. Day—beginning 2 hours after sunrise. 2. Wind speed less than 5 knots. 3. Sky cover less than 30 percent. ALL THREE CONDITIONS MUST BE MET.	Unstable condition—marginal for smoke employment.

The maneuver-target line is an imaginary line that extends from the maneuver unit to the target. Smoke is generally required when the maneuver unit is at its most vulnerable point along the route of march. Therefore, when planning smoke, the maneuver-target line is drawn from the most vulnerable point along the route of march to the target (Figure 52).

Temperature. A rise in temperature may increase the rate of evaporation. This causes the smoke screen to dissipate more rapidly.

Humidity and Precipitation. High humidity and precipitation may enhance the effectiveness of smoke. This is particularly true with the improved smoke round.

FIGURE 52. MANEUVER-TARGET LINE.

MANEUVER-TARGET LINE

TREES

ROUTE OF MARCH

POINT AT WHICH
FRIENDLY FORCE
IS MOST
VULNERABLE TO
ENEMY OBSERVATION

OBSERVER

MANEUVER
ELEMENT

CROSSWIND

HEAD WIND | TAIL WIND

CROSSWIND

TARGET

Ammunition

The amount of smoke ammunition in basic loads is limited. Expenditures of smoke ammunition vary considerably with each specific mission. All users must know the amount of ammunition available and how much smoke it will provide. Large requirements for smoke may require redistribution of the basic loads of several units. You can also request an issue of additional smoke ammunition for a specific operation. Combat experience has shown that smoke may not be available to support all smoke requests.

Available Means

Before firing a smoke mission, the observer, fire direction officer (FDO), and the FSO must consider the means available. The FIST chief recommends to the maneuver commander whether mortars or artillery should be used. The FDO decides which weapon will fire or whether to have reinforcing units support the mission. The FSO provides tactical information that could affect the fire support available. All assets are limited; for each mission, the decision must be made as to who can best fulfill the requirements.

Terrain

The terrain affects the use of smoke. The following rules apply:

- Smoke tanks in defilade so that they lose their sense of direction.

- Smoke seeks low spots.

- Firing smoke on dry vegetation may start fires.

- Do not fire smoke on deep mud, water, or snow. The smoke canisters normally will not function properly.

- Do not fire smoke on steep slopes; canisters roll downhill.

Enemy

The following guidelines must be remembered:

- Know and anticipate the enemy.

- Fire smoke on enemy artillery OPs/gunners to reduce their effectiveness.

- Fire smoke and HE on the enemy when they employ from column to line formation. The HE will keep them buttoned up. The smoke will cause maximum confusion.

- Fire smoke and HE on minefields to cause maximum confusion.

- Understand the effects of smoke on friendly positions. Smoke used without sufficient thought and planning reduces the user's effectiveness more than that of the enemy.

Command and Control

The maneuver commander for whom the smoke is planned must approve its use. When he issues his plans and concepts for an operation, he should state the guidelines on the amount of smoke that can be used and any restrictions on its use.

To ensure smoke responsiveness, the FIST chief, FSO, and/or FSCOORD must request this smoke planning guidance if it has not been started. The maneuver commander responsible for the operation must coordinate smoke operations with all units participating in or potentially affected by the operation.

The operations officer (S3/G3) is responsible for the integration of smoke into the plan of maneuver. The FSO/FSCOORD must keep the maneuver commander advised on the availability of ammunition and delivery systems. Combat arms troops must be well trained in smoke operations, and comprehensive SOPs must be available to and understood by all. This shortens reaction time.

Immediate Smoke

The objective of immediate smoke is to obscure the enemy's vision. Suppression of a small location can be achieved by use of immediate smoke to reduce the enemy's ability to observe. Immediate smoke can be planned, or it can be used after immediate suppressive fire has been found to be ineffective. When immediate smoke is planned, the immediate smoke target is sent to the FDC as part of the target list. Weather conditions must be considered in planning immediate smoke, since a change in wind direction could make the planned smoke ineffective. If immediate suppressive fire is ineffective because of inaccurate target location, the observer may give a bold shift and request that the smoke be fired.

Employment Considerations. Immediate smoke should not be requested initially if, by SOP, HE is on the loading tray. Rather than change the ammunition, the observer should request a fire mission that will expend the SOP suppression rounds and then call for immediate smoke. Before firing immediate smoke, the observer must realize that suppression by smoke will not be as immediate as suppression by HE, since it takes time for smoke to build up. Inaccurately placed smoke may still provide obscuration; whereas, inaccurately placed HE may not give the desired results. Although immediate smoke will provide suppression for a longer period of time than will HE, it is effective only against a pinpoint target or a small area target less than 150 meters in diameter.
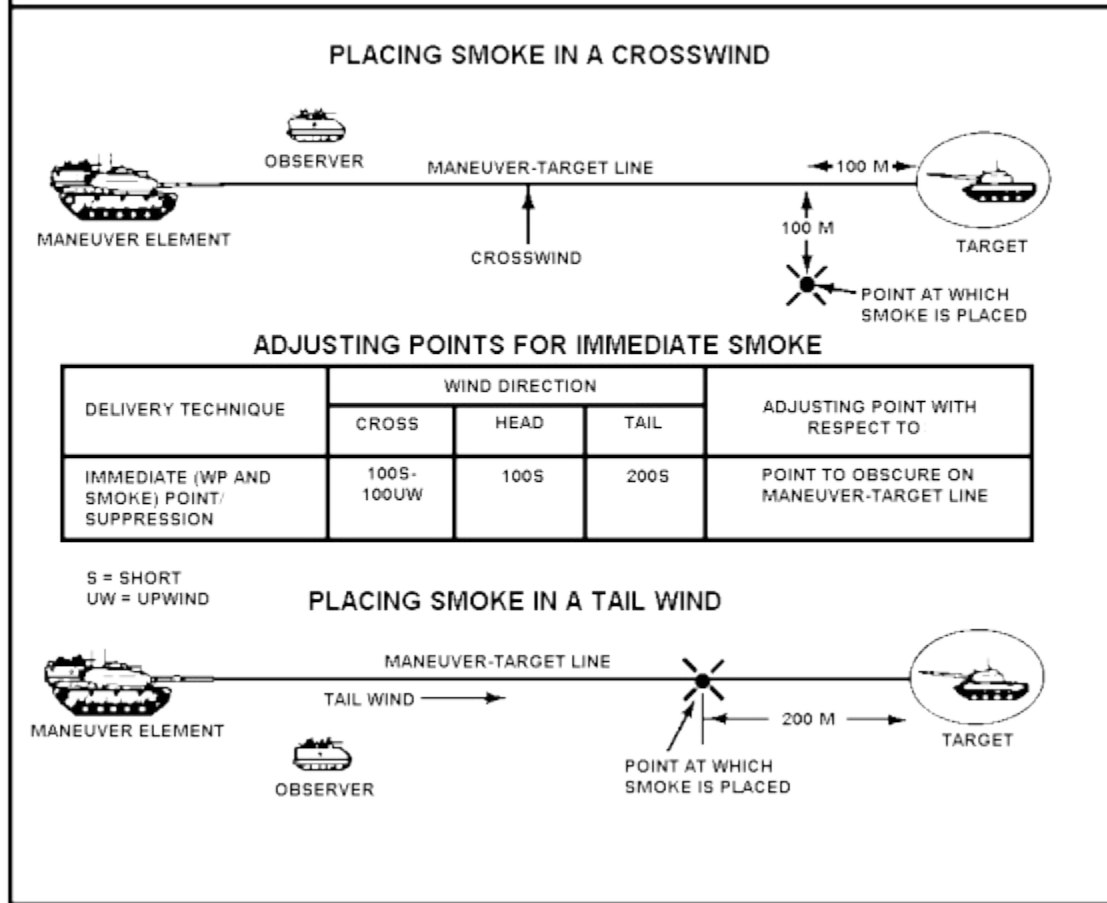
The type of ammunition to be fired should be dictated by SOP. A suggested mix is two guns with one firing WP and the other gun firing smoke on the first volley. This is followed by both guns firing smoke on subsequent volleys.

Immediate smoke normally is used on a planned suppressive target, or when shifting after immediate suppression with HE has been found to be ineffective because of positioning. Therefore, corrections for deviation, range, and height of burst must be made. The minimum corrections are 50 meters for deviation and 100 meters for range. The height of shell smoke (M116A1) can be adjusted as follows: Ground burst, up 100; canisters bouncing excessively, up 50; canisters to spread out, down 50.

When a mixture of smoke and WP is fired, smoke probably will be effective 30 seconds after the shells' impact, and it will last approximately 4 to 5 minutes. If the smoke is required for a longer period, additional volleys of smoke should be requested.

The adjusting point on which the smoke is placed depends on weather conditions. Under normal circumstances, the point at which it is directed should be approximately 100 meters short of the maneuver-target line and 100 meters upwind of the enemy's location (Figure 53).

FIGURE 53. PLACEMENT OF IMMEDIATE SMOKE.

PLACING SMOKE IN A CROSSWIND

OBSERVER

MANEUVER-TARGET LINE

100 M

MANEUVER ELEMENT

100 M

CROSSWIND

TARGET

POINT AT WHICH
SMOKE IS PLACED

ADJUSTING POINTS FOR IMMEDIATE SMOKE

| DELIVERY TECHNIQUE | WIND DIRECTION | | | ADJUSTING POINT WITH RESPECT TO |
	CROSS	HEAD	TAIL	
IMMEDIATE (WP AND SMOKE) POINT/ SUPPRESSION	100S- 100UW	100S	200S	POINT TO OBSCURE ON MANEUVER-TARGET LINE

S = SHORT
UW = UPWIND

PLACING SMOKE IN A TAIL WIND

MANEUVER-TARGET LINE

TAIL WIND

MANEUVER ELEMENT

200 M

TARGET

POINT AT WHICH
SMOKE IS PLACED

OBSERVER

If the wind is a crosswind (blowing across the maneuver-target line), the smoke is placed upwind so that it suppresses the enemy's vision along the maneuver target line. If the wind is a head wind (blowing away from the target), the smoke is placed 100 meters short of the maneuver-target line. Care must be used with head winds, since the smoke may blow onto the maneuver element. When the wind is a tail wind (blowing toward the target), the smoke is placed at least 200 meters short of the target to keep the smoke from landing beyond the target.

Quick Smoke

The objective of quick smoke is to obscure the enemy's vision or screen the maneuver elements. The quick smoke mission is like a normal HE adjust fire mission in that obscuring the enemy is required, but the urgency of the situation does not dictate immediate smoke procedures.
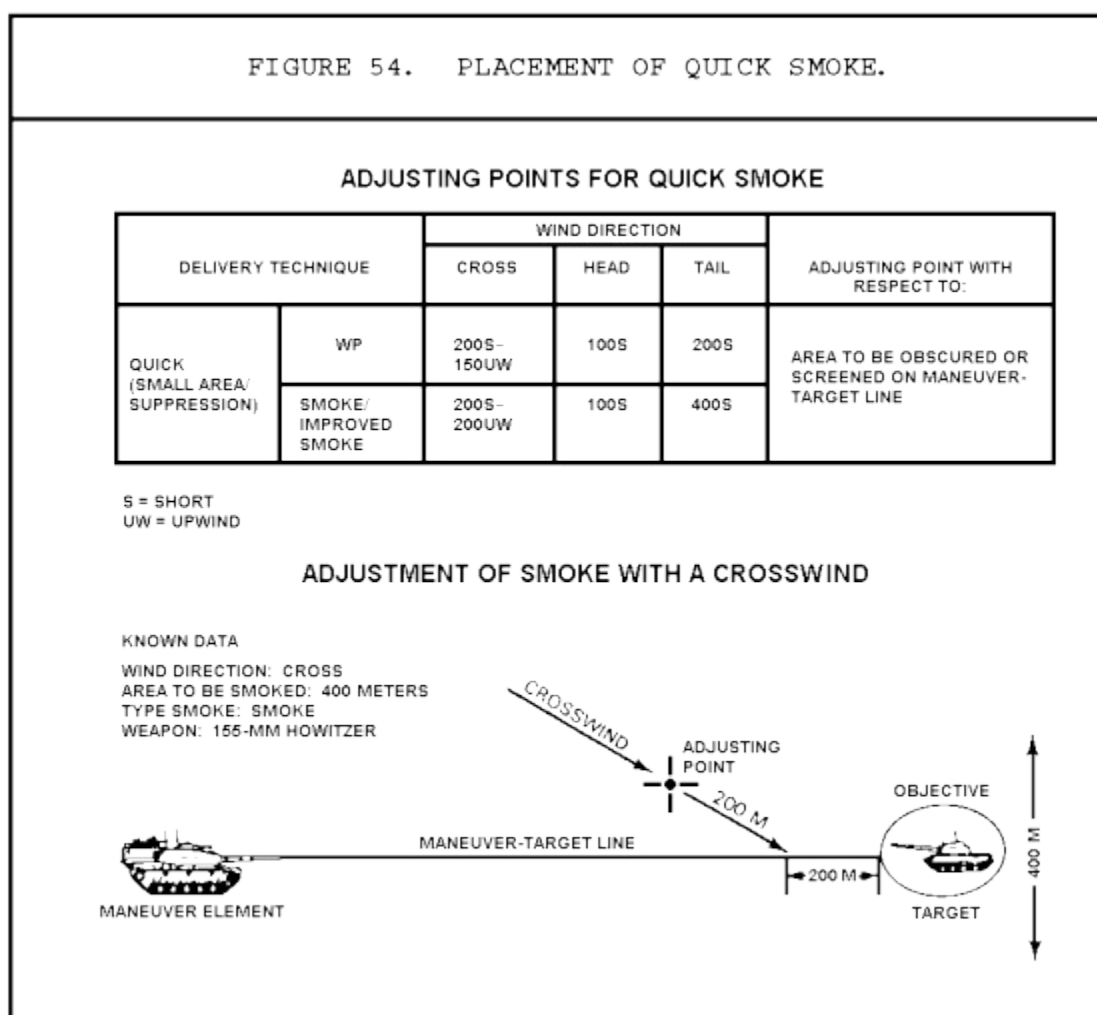
The mission is begun by adjusting with HE. Then smoke is fired when rounds are within 200 meters of the adjusting point and in fire for effect.

Employment Considerations. The quick smoke mission is used to obscure an area up to 600 meters wide. For areas larger than 600 meters, the observer can fire multiple quick smoke missions. Smoke may be effective up to 1,500 meters downwind.

When preparing a quick smoke mission, the observer first determines the nature of the target and the location of the adjusting point (Figure 54). Then he determines the size of the area and the wind direction in relation to the maneuver target line.

To select the adjusting point, the observer determines the wind direction and whether WP or smoke is to be fired to effect.

The FDC must be informed of the target length, the wind direction, and the length of time the smoke is required. The observer sends this information to the FDC as soon as possible (before commanding fire for effect). The observer may extend the time of effective smoke by requesting subsequent volleys.

FIGURE 54.   PLACEMENT OF QUICK SMOKE.

ADJUSTING POINTS FOR QUICK SMOKE

DELIVERY TECHNIQUE		WIND DIRECTION			ADJUSTING POINT WITH RESPECT TO:
		CROSS	HEAD	TAIL	
QUICK (SMALL AREA/ SUPPRESSION)	WP	200S– 150UW	100S	200S	AREA TO BE OBSCURED OR SCREENED ON MANEUVER- TARGET LINE
	SMOKE/ IMPROVED SMOKE	200S– 200UW	100S	400S	

S = SHORT
UW = UPWIND

ADJUSTMENT OF SMOKE WITH A CROSSWIND

KNOWN DATA

WIND DIRECTION: CROSS
AREA TO BE SMOKED: 400 METERS
TYPE SMOKE: SMOKE
WEAPON: 155-MM HOWITZER

CROSSWIND

ADJUSTING POINT

200 M

OBJECTIVE

MANEUVER-TARGET LINE

200 M

400 M

MANEUVER ELEMENT

TARGET

If the smoke must be effective at a specific time, the observer requests "at my command" and the time of flight. To determine when to order the smoke fired, the observer adds the time of flight to the avenue build-up time of 30 seconds for WP and 60 seconds for smoke.

If the smoke is effective, the observer must decide whether to shift the smoke or to fire HE. If he decides to shift, there may be a break in the screen while new data is being computed.

Adjustment. The adjustment is based on the type of smoke.

- Shell Smoke. Shell HE will be used in adjustment until a 200-meter bracket is split. The observer will then request shell smoke. One smoke round is fired, any necessary corrections are made, then fire for effect is requested.

- Shell White Phosphorous. This mission is conducted like an adjust fire mission, with WP in effect.

- Improved Smoke (M825). The M483A1 dual-purpose improved conventional munitions in the self-registering mode will be fired in adjustment. Upon splitting a 200-meter bracket, fire for effect will be requested. No HOB adjustment is necessary with the improved shell.

You have just learned about illumination and smoke and how they are used to support a fire mission. Next, you will learn the phases of preparation fires as well as the purpose and techniques of quick fire support planning.

Learning Event 5:
IDENTIFY THE CHARACTERISTICS AND PHASES OF PREPARATION FIRES AND THE PURPOSES AND TECHNIQUES OF QUICK FIRE SUPPORT PLANNING

Planning for fire support must include preparation fires in support of an attack, and quick fire support to provide an expeditious method to orchestrate fire support for an impending mission.

PREPARATION FIRES

The preparation is an intense volume of fire delivered in accordance with a time schedule to support an attack. It may include a single fire support means (FA only) or multiple means (mortars, FA, NGF). Normally, fires begin before H-hour and may extend beyond it. Usually, an FA preparation is planned by a direct support FA battalion or higher echelon. Fires may start at a prescribed time or be held on-call until needed. The duration of the preparation is influenced by several factors. These are the number of targets for attack, the fire support assets, and the ammunition on hand.

Phasing

A preparation is phased to allow successive attacks of certain types of targets.

<u>Phase I</u>. Phase I should provide for early attack of enemy fire support means and observation capabilities, including FA headquarters and command posts. Such an attack degrades the enemy's ability to react with long-range indirect fires and to gain intelligence about the operation.

<u>Phase II</u>. Phase II should attack other command posts, communications facilities, assembly areas, and reserves. The goal is degradation of the enemy's ability to reinforce his defense and shift forces to counter our main effort.

<u>Phase III</u>. Phase III should include defensive areas in the forward portion of the enemy position areas and targets that pose an immediate threat to attacking troops. The purpose of this phase is to suppress enemy direct fire systems until our maneuver forces have closed with them. Provisions must be made to keep hostile fire support means and other critical targets neutralized throughout the preparation, time and ammunition permitting.

Firing

When assigning fire support systems to targets in the preparation, planners should, if possible, ensure that some fire units remain available to attack targets of opportunity.

During the firing of a preparation, a target of opportunity may pose such a threat to the supported force that some fire support units may have to leave the preparation to attack it. If field artillery is directed to do so, the S3 assigns the units to fire on the target of opportunity.

If the fire units are diverted from the preparation, they rejoin the preparation at the current point in time--not at the time they left it. For example, if a unit firing a preparation is diverted to a target of opportunity at H-5 and takes 4 minutes to attack the target, the unit would reenter the preparation at H-1. This means that some targets may not be attacked by fire support assets originally planned for the preparation. The firing unit diverted from the preparation must report to the appropriate FSE those targets that were not fired or were not fired with the scheduled amount of ammunition. This information lets the FSCOORD and the supported maneuver commander make sound decisions for the attack of those targets while ensuring the safety of the attacking force.

Preparations are continually updated to purge old targets and add new ones. The agency preparing the schedule must set a time after which no other changes can be made. This cutoff time varies among units; it is based on training, communications, and scheduling capabilities.

The schedule planner must ensure there is enough time for changes to be sent to firing units, for technical fire direction to be performed, and for ammunition to be prepared and fired. The maneuver force commander, with the advice of his FSCOORD, makes the final decision as to whether a preparation should be fired. This decision is based on such considerations as:

- Will the loss of surprise from the preparation be offset by the damage done to the enemy?
- Are there enough targets and means to warrant a preparation?

● Can the enemy recover before the preparation fires can be exploited?

Shift Times. The preparation must begin and end with all fire units that are used in the preparation. No gap (two or more consecutive shift times) in scheduling should occur. Shift time is the interval between the time a cannon unit can have rounds impacting on one target and the time it can have rounds impacting on a new target.

Shift time is affected by many variables (state of training, amount of shift, and type of munition to be fired). For planning and scheduling purposes, a shift time of one minute is established for light and medium artillery; a shift time of two minutes is used for heavy artillery. Any gaps that occur should be filled by refiring phase I targets or targets the maneuver commander has designated as priority targets.

Units participating in the preparation cannot begin firing on targets in a subsequent phase unless they have begun firing on the last target of the current phase. This may not always be possible because some weapons may not have adequate range to fire at targets in all phases. In that case, the weapons are scheduled into the phase that is within their capabilities, rather than being excluded altogether from the preparation. Fires are planned on the basis of the sustained rate of fire for each weapon system. (Refer to table 8 and table 9).

FIGURE 55.
TABLE 8.   ARTILLERY CANNON AND ROCKET CHARACTERISTICS.

ASSET	MAXIMUM RANGE (METERS) a. WITH RAP b. WITHOUT RAP	MAXIMUM RATE OF FIRE	SUSTAINED RATE OF FIRE	AMMUNITION AVAILABLE
Self-Propelled 155-mm Howitzer M109A1/A2/A3	a. 23,500 b. 18,100	4 rounds per minute	1 round per minute	HE, RAP, ICM, HC, illum, DPICM, ADAM, nuc, WP, chemical, RAAMS, CPHD
Self-Propelled 203-mm Howitzer M110A2	a. 30,000 b. 22,900	1.5 rounds per minute	0.5 round per minute	HE, ICM, nuc, chemical, DPICM, RAP
Self-Propelled 227-mm Multiple Launch Rocket System M270	a. NA b. 30,000	1 round per 1.5 seconds	1 round per 4.5 seconds	DPICM, TGW[2], chemical[2]
Towed 105-mm Howitzer L119	a. IRAP-19,500 RAP-15,400 b. 14,300	10 rounds per minute	3 rounds per minute	HE, WP, HESH, illum

[1] Includes CS (riot control agent), nonpersistent nerve (SB), and mustard (H).

[2] Both the TGW and binary chemical warheads are under development. Neither is currently fielded.

FIGURE 56.
TABLE 9. ARTILLERY CANNON AND ROCKET CHARACTERISTICS (CONTINUED).

ASSET	MAXIMUM RANGE (METERS) a. WITH RAP b. WITHOUT RAP	MAXIMUM RATE OF FIRE	SUSTAINED RATE OF FIRE	AMMUNITION AVAILABLE
Towed 105-mm Howitzer M101A1	a. 14,500 b. 11,600	10 rounds per minute	3 rounds per minute	APERS, gas¹, HE, ICM, RAP, HEP-T, illum, HC, WP
Towed 105-mm Howitzer M102	a. 15,100 b. 12,400	10 rounds per minute	3 rounds per minute	APERS, gas¹, HE, ICM, RAP, HEP-T, illum, HC, WP
Towed 155-mm Howitzer M114A1	a. NA b. 14,600	4 rounds per minute	1 round per minute	HE, ICM, illum, nuc, HC, WP, chemical
Towed 155-mm Howitzer M114A2	a. 19,300 b. 14,600	4 rounds per minute	1 round per minute	HE, RAP, ICM, illum, DPICM, ADAM, HC, WP, nuc, chemical, RAAMS, CPHD
Towed 155-mm Howitzer M198	a. 30,000 b. 22,400	4 rounds per minute	As indicated by thermal warning device	HE, RAP, ICM, illum, DPICM, ADAM, nuc, WP, chemical, RAAMS, CPHD

LEGEND:
APERS=antipersonnel
CPHD=Copperhead
HC=smoke
HEP-T=high explosive plastic tracer
HESH=high-explosive squash head (antitank, UK)

illum=illuminating
IRAP=improved rocket-assisted projectile
NA=not applicable
nuc=nuclear
RAP=rocket-assisted projectile
TGW=terminally guided warhead

QUICK FIRE SUPPORT PLANNING

The purpose of quick fire support planning is to provide an expeditious method to orchestrate fire support for an impending maneuver operation. Quick fire support planning techniques are standardized. A quick fire support plan may be originated by:

- A CO FSO to support a company.

- An FSO to support a battalion/task force.

- A DS battalion commander/brigade FSO to support a brigade.

The following table (table 10) shows the sequence of actions and concurrent activities during the planning and preparation of a quick fire support plan. The table is based on actions of a battalion commander and his direct support FSO, but the sequence is similar at all levels.

When the fire support planner has developed the fire support plan, sent the warning order, and given orders for adjustment, he must monitor the progress of the adjustment and be prepared to alter the original plan. For example, he may have to:

- Recommend changes in the priority of targets.

- Recommend a change in the degree of accuracy of adjustment.

- Forego adjustment on some targets and predict them.

- Adjust some targets himself.

- Prepare and transmit the fire support plan schedule.

- Brief the subordinate fire support elements, if appropriate.

- Brief the mortar platoon commander, naval gunfire liaison officer (NGLO), and forward air controller (FAC), when necessary.

- Distribute the fire support plan.

Quick Fire Plan Form

DA Form 5368-R (Quick Fire Plan) is the main tool for dissemination of quick fire plan information. Written copies of the quick fire plan are normally produced by the originator, each battery FDC, and the DS battalion tactical operations center. (Refer to figures 58 and 59.)

The originator prepares copies for:

- The maneuver commander.

- Each subordinate maneuver commander.

- Artillery observers and other observers responsible for controlling the fire support plan.

- All firing units, if plans are not sent by radio or wire.

FIGURE 57.

TABLE 10. SUGGESTED SEQUENCE OF ACTIONS FOR PREPARING A QUICK FIRE SUPPORT PLAN.

MANEUVER COMMANDER/S3	FIRE SUPPORT OFFICER/FIST	DS BATTALION S3/FIRE UNITS
1. Briefly describe operation	2. Inform DS battalion S3 by situation report and warning order	3. Inform DS battalion commander and assess brigade priorities
4. Position mortars and FACs		5. Send availability of fire units and ammunition
6. Provide detailed description of operation	7. Assess supportability of operation and inform maneuver commander	
	8. Recommend policy on adjustment of targets	
	9. Brief adjusting observers	
10. Direct mortars to begin adjustment of fire		11. Direct artillery to begin adjustment of fire
		12. Send time check to FSO and fire units
	13. Give time check to maneuver command, mortars, and FAC	
	14. Send target information to mortars, CAS, artillery, NGF	15. Begin production of target data for fire units
16. Begin production of target data for mortars	17. Send schedule of targets to guns and mortars	18. Prepare ammunition in sufficient quantities
19. Prepare mortar ammunition in sufficient quantities	20. Brief FISTs/FOs	21. Report *READY* on fire support plan
22. Mortars/CAS report *READY* on fire support plan	23. Inform manuver commander *READY* on fire support plan	
	24. Review fire support plan and modify as necessary	
	25. Join maneuver commander to control fire support plan or go to designated location	

Each battery FDC prepares copies for:

● The battery commander.

● Each FDC involved in the fire support plan.

The DS battalion TOC prepares copies for:

- The battalion S3 or FDO.

- Each battery. Three copies are prepared for each battery. These copies are required only when orders are passed through the FDC and/or when fire units have not been allocated for the schedule by the originator.

Schedule

The schedule for a quick fire plan may be passed to FDCs in any manner, provided it is brief, absolutely clear in meaning, and does not violate security. Verbal communication is normal for quick fire planning and is based on the quick fire plan form.

Modifications

The maneuver commander is normally the only person who may authorize modifications to the quick fire plan. However, this authority may be delegated to a subordinate or to the FSO. Any subordinate commander may request modification.

When a modification has been ordered, the FSO will issue orders necessary to implement it. The FSO should remember that he must allow time for his orders to be acted upon.

Other Quick Fire Plan Assets

The fire support planner decides how many targets can be engaged in the quick fire plan by adding up all the fire units available to him. In addition to artillery, the following resources may be incorporated in the fire plan:

Mortars. Details of targets that the mortars are to engage will be agreed on by the maneuver commander and the fire support planner. The fire support planner should brief the mortar officer.

FIGURE 58.   QUICK FIRE PLAN FORM.

HEADING

The heading of the DA Form 5368-R includes blocks for the following information:

FIRE PLAN. Enter the nickname of the fire support plan.

H-HOUR. H-hour is normally sent as a separate message. It may be indicated in the following ways.
- As a definite time; e.g., "H-HOUR 1400."
- As an indeterminate time, e.g., "H-HOUR NOT BEFORE 1330."
- "H-HOUR LATER."

SUPPORTING. Enter the supported maneuver element if this information is passed by means other than digital and must be encoded.

SHEET. Indicates the total sheets used.

ORIGINATOR. Enter the name of the fire support planner.

MODIFICATIONS BY. Enter the call sign of the individual authorized to change the fire plan.

DATE-TIME GROUP. The date-time group of origin is entered but is not transmitted.

TARGET INFORMATION

In this section a complete list of targets to be used in the fire support plan is shown. For each target, description, location, altitude, and applicable remarks should be provided.

QUICK FIRE PLAN

For use of this form, see FM 6-20, proponent agency is TRADOC.

FIRE PLAN	SUPPORTING	ORIGINATOR	MODIFICATIONS BY
H-HOUR	SHEET	OF	DATE TIME GROUP

TARGET INFORMATION

LINE	TARGET NUMBER (a)	DESCRIPTION (b)	LOCATION (c)	ALTITUDE (d)	REMARKS (e)
1					
2					
3					
4					

FIGURE 59.   QUICK FIRE PLAN FORM (REVERSE).

SCHEDULE

ORGANIZATION. Column (f) is used to indicate the parent firing organization. It may be in code.

FIRE UNITS.   Column (g) is used to indicate the fire unit. A call sign, unit designator, or code may be used.

TIMINGS. Entries in column (h) indicate times, duration, and quantity of rounds on targets. The given time is entered along the graduated scale at the top of the column. Timings will normally be in relation to an H-hour. Target information is entered by drawing a horizontal line (with vertical ends if desired) between the times ordered, and then inserting:

- The target number (above the line).
- The total number of rounds required from the fire unit (below the line).

Make references to the remarks in column (j) below the line of the appropriate target.

REMARKS.   Column (j) includes applicable notes, to which references are made in column (h), and all special instructions. Information in this column may include:

- Method of fire for effect, if a starting time only is indicated for a particular target.
- Nonstandard ammunition.
- Details of other fire units not listed on the schedule that will engage the target; e.g., tanks.
- Numbers of guns if less than the fire unit shown in column (g).

Note. *The timings shown indicate the TOT and duration of fire. No fire is to fall on target after the time shown.*

SCHEDULE

LINE	ORGANIZATION (f)	FIRE UNITS (g)	TIMINGS (h)	REMARKS (j)
1				
2				
3				
4				
5				

Aircraft. When both aircraft and indirect fire weapons are programmed to attack the same target, consideration must be given to deciding the position of the aircraft in the attack sequence. For CAS missions, it may be advisable for aircraft strikes to be scheduled first. However, if their time on target

cannot be guaranteed due to limited visibility or other factors, indirect fire means should fire first. CAS targets may be identified by:

- The forward air controller or FIST using a laser target marker.

- Firing a smoke round from artillery or mortars.

- Firing an illumination round from artillery or mortars.

Naval Gunfire. Naval guns should be controlled through the NGLO; they will be treated like any other fire unit. Naval gunfire spotters may be available for use as observers.

CONCLUSION

You have just learned about the considerations and procedures for planning fire support. They include offensive, defensive, and retrograde operations. Also covered were the use of smoke and illumination and the techniques of quick fire support planning.

If you have any questions pertaining to these areas, go back and reread the text. When you are ready, use the link and begin the practice exercise.

Lesson 2

Practice Exercise

Instructions   The following items will test your understanding of the material covered in this lesson. There is only one correct answer for each item. When you have completed the exercise, check your answers. If you answer any item incorrectly, review that part of the lesson which contains the portion involved.

SITUATION

You have been assigned to the 210th Infantry Division. The division has been deployed to Germany in support of NATO operations against the Orange forces. You will be assigned various command and staff positions throughout your tour with the division in order to make maximum use of your training.

PART I
1. As a battalion S3, you coordinate plans with the fire support officer. In addressing fire support for the offensive, the FSCOORD should

    ○   A. emphasize the limitations of fire support immediately available.
        B. focus on fire support tasks, command and control, and coordination and planning.
        C. concentrate on selecting appropriate ammunition and weapons systems.

2. You are a company commander about to participate in a movement to contact. You are planning fire support for your missions with the FSO. As part of your plan, you

    A. provide immediately responsive fires to the leading element.

    B. concentrate fires on potential enemy reinforcements.

    C. establish targets to deceive and divert the enemy away from your route.

3. As the S3 of a maneuver battalion, you must plan fire support for an exploitation operation. Exploitation is

    A. pursuit of a retreating enemy force.

    B. conducted to prevent enemy reconstitution of forces.

    C. planned against a well organized defense.

PART II
4. As an infantry battalion S3, you, with the FSO, plan fire support for defensive operations. One of the main aspects of AirLand Battle is initiative. With initiative, your unit can

    A. suppress enemy antitank weapons.

    B. blend all resources into a defensive operation.

    C. shift from the defensive to the offensive.

5. Your battalion is on the defensive. The battalion commander has provided guidance for the fire support mission. As the S3, in coordination with the FSO, you plan integrated fire support to

    A. target enemy command posts and logistical centers.

    B. provide fires to protect secondary avenues of approach priority.
    C. force enemy armor to button up and slow down.

6. As the maneuver battalion S3, you, along with the FSCOORD, are planning fire support for a defensive operation in the main battle area. Fires are

    A. provided to harass and prevent the enemy from advancing.

    B. planned to separate infantry from armor.

    C. established for interdiction of enemy air space.

PART III
7. You are an infantry commander conducting operations in urban terrain. Your lead elements come upon resistance and call for fire support. Among tall buildings, you expect the FSO to normally

    A. employ mortars due to their high trajectory.

    B. use M109 or M110 howitzers due to crew protection.

    C. employ SP howitzers/guns due to their mobility.

8. You are a maneuver company commander preparing to move elements to another location. To obscure the enemy vision, you coordinate with the FSCOORD to

    A. provide immediate smoke.

    B. give you deliberate smoke.

    C. supply quick smoke.

9. You are an S3 of a maneuver battalion planning for a movement to contact during limited visibility. After coordination with the FSO and determining that the area concerned has greater width than depth, you will normally be

    A. provided two-gun illumination lateral spread.

    B. given illumination range spread.

    C. provided one-gun illumination.

10. You are a company commander given a mission for a deliberate attack. You must move across an open area and are considering the use of smoke to obscure the enemy's observation. Therefore, you

    A. ask for obscuring smoke.

    B. request a smoke blanket.

    C. call for screening smoke.